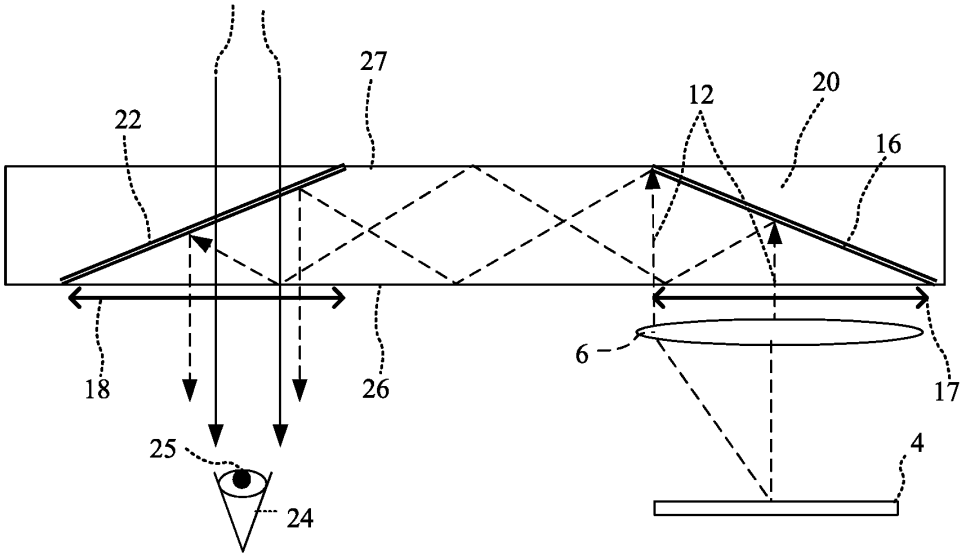

FIG. 1 (PRIOR ART)

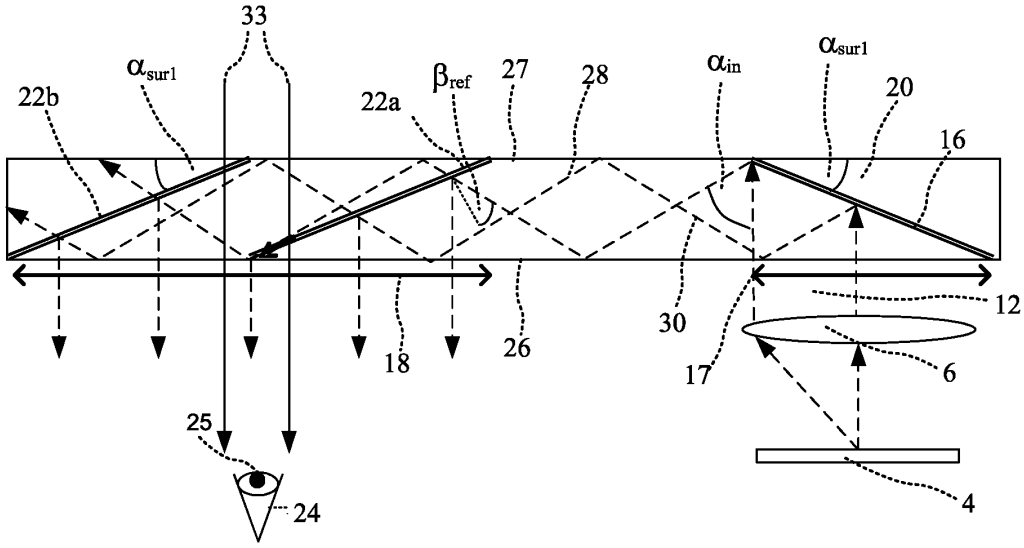

FIG. 2 (PRIOR ART)

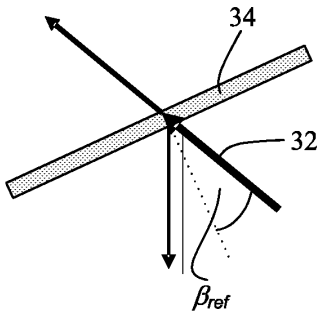

FIG. 3A (PRIOR ART)

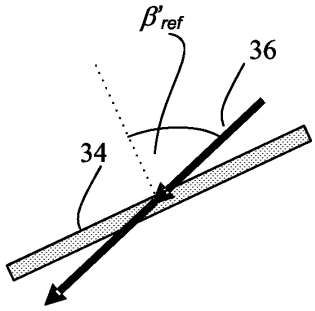

FIG. 3B (PRIOR ART)

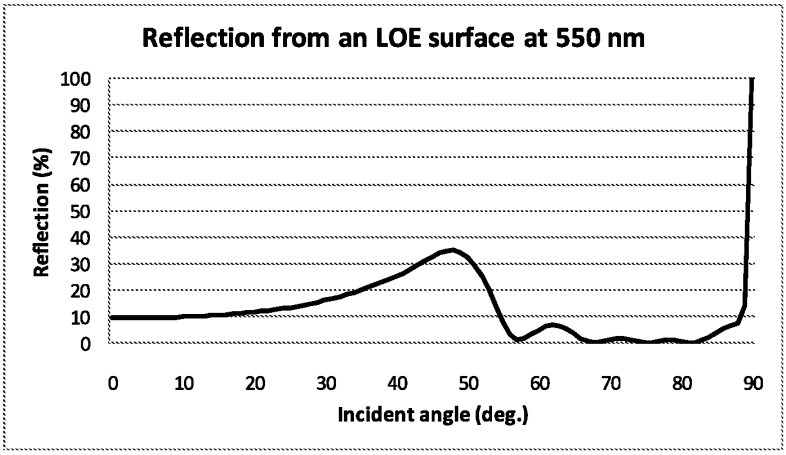

FIG. 4

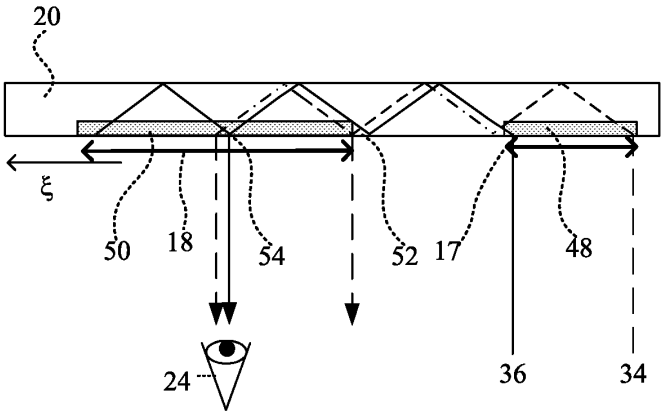

FIG. 5 (PRIOR ART)

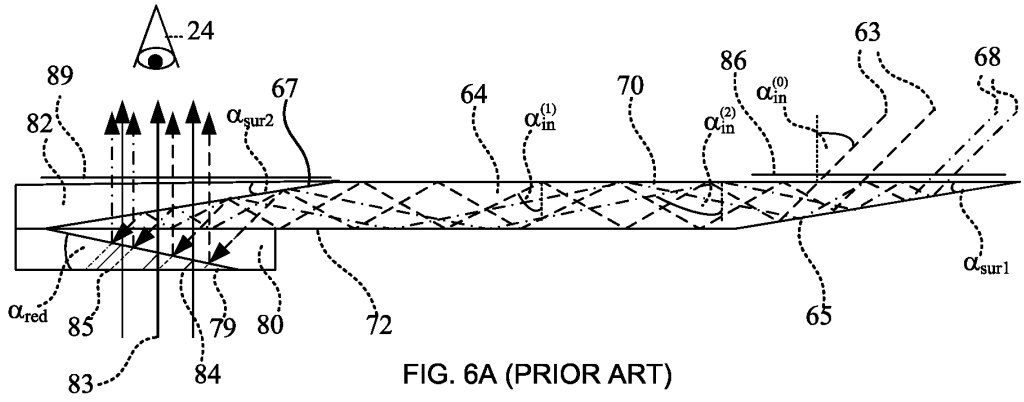

FIG. 6A (PRIOR ART)

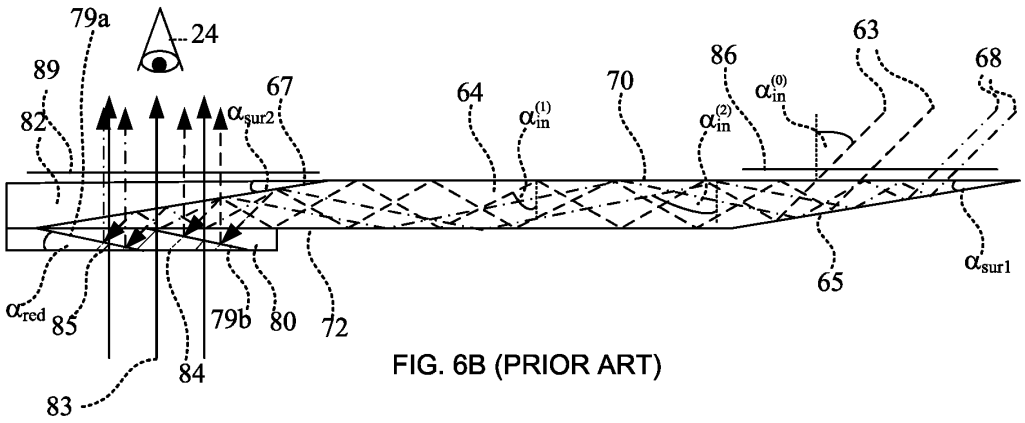

FIG. 6B (PRIOR ART)

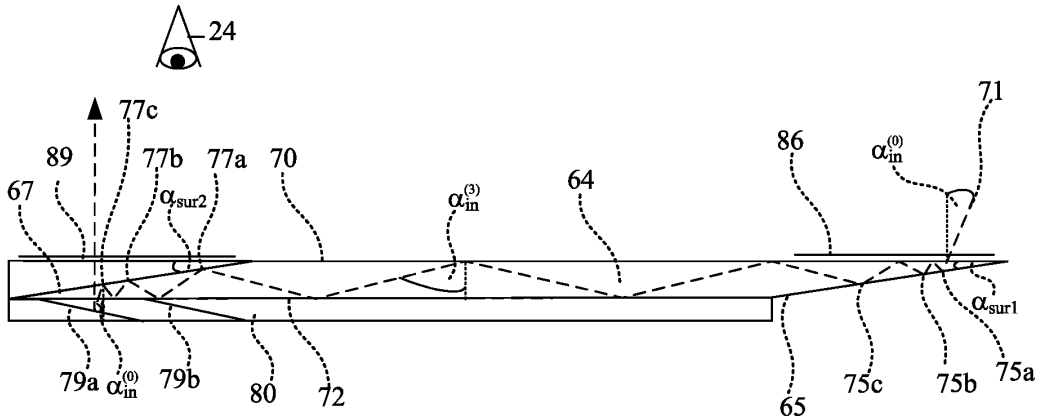

FIG. 6C (PRIOR ART)

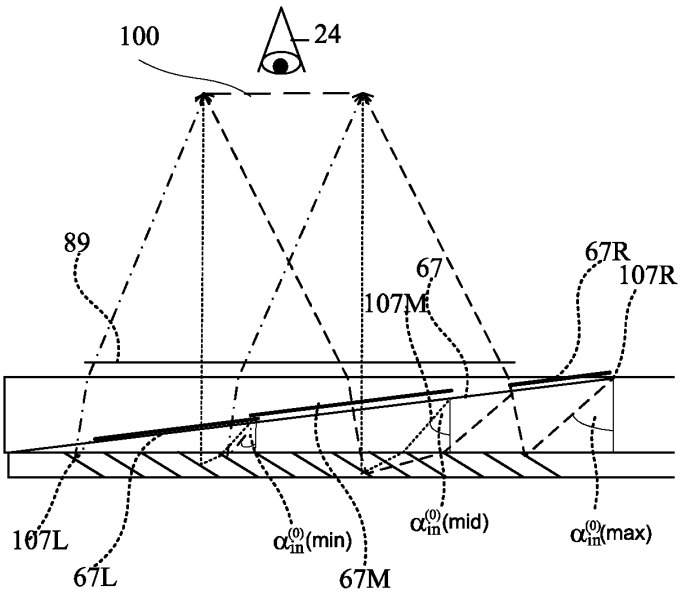

FIG. 7

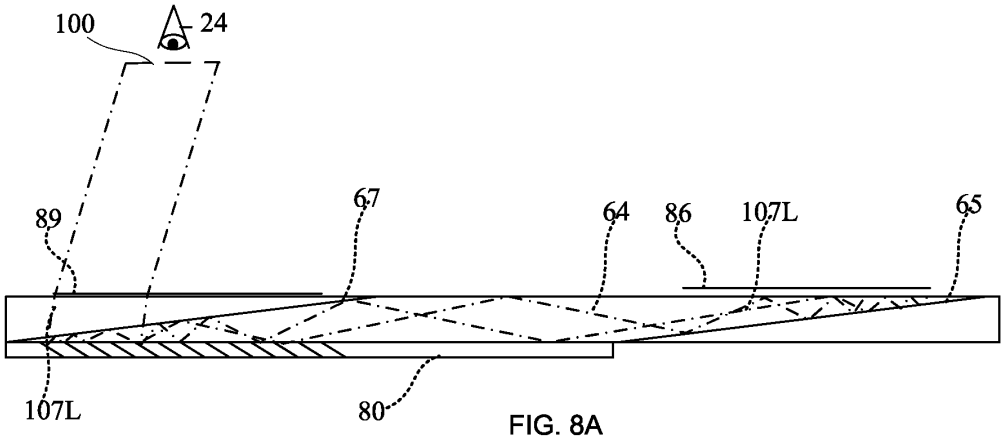

FIG. 8A

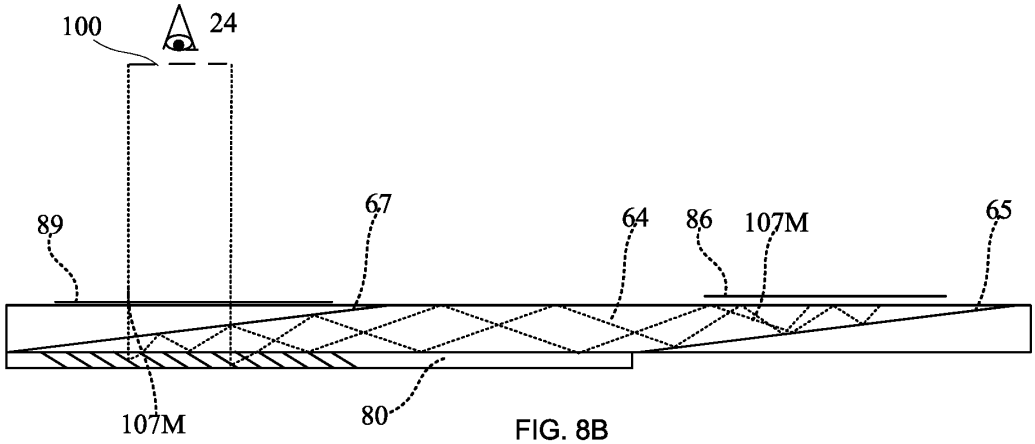

FIG. 8B

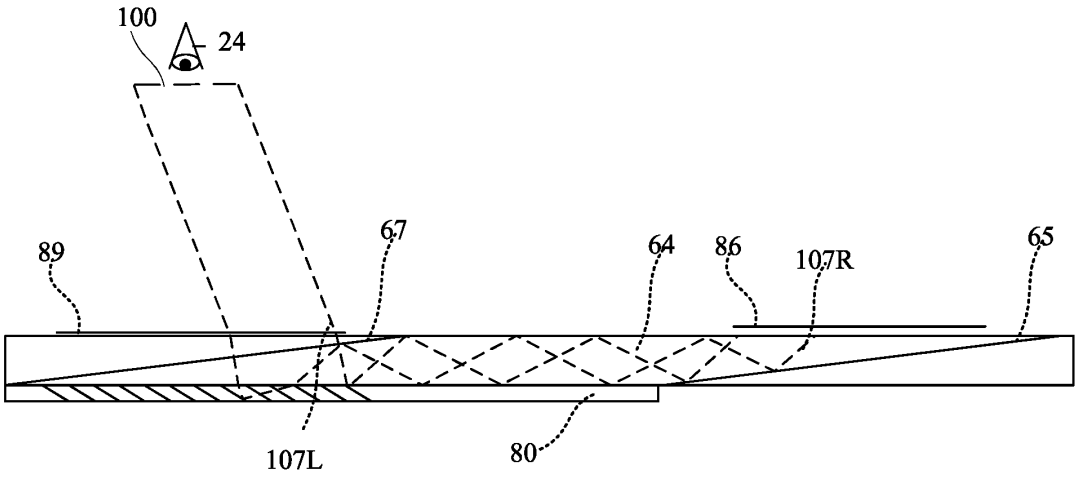
100
24
89
67
64
86
107R
65
107L
80

FIG. 8C

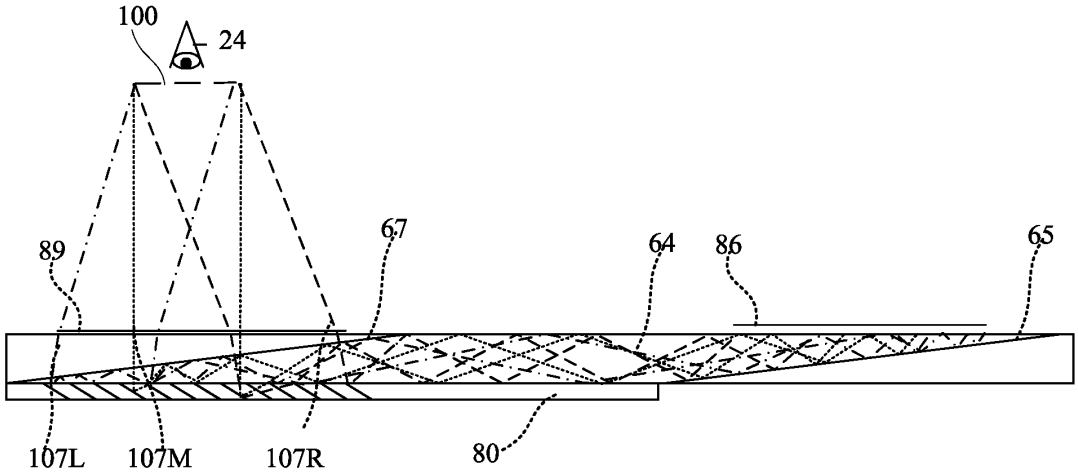
100
24
89
67
64
86
65
107L
107M
107R
80

FIG. 8D

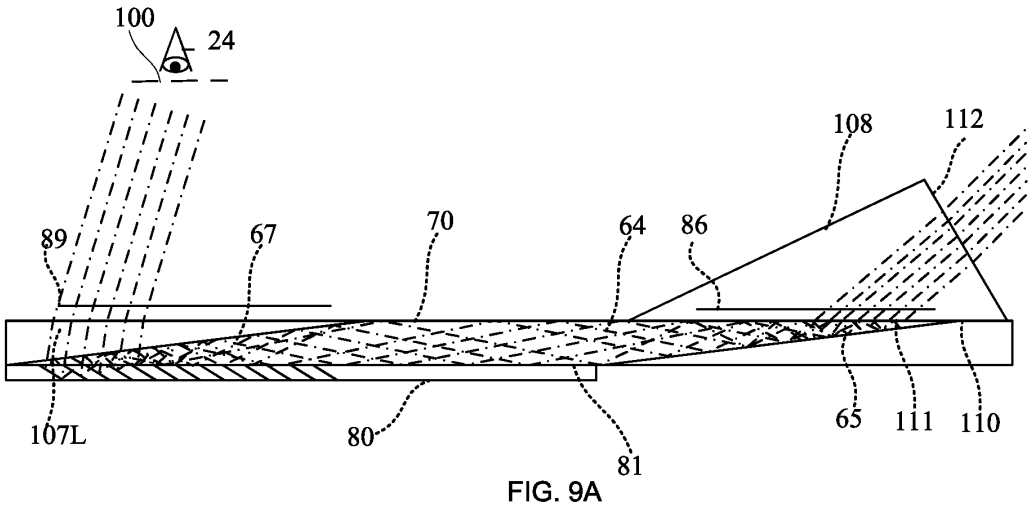
100
24
108
112
89
67
70
64
86
107L
80
81
65
111
110

FIG. 9A

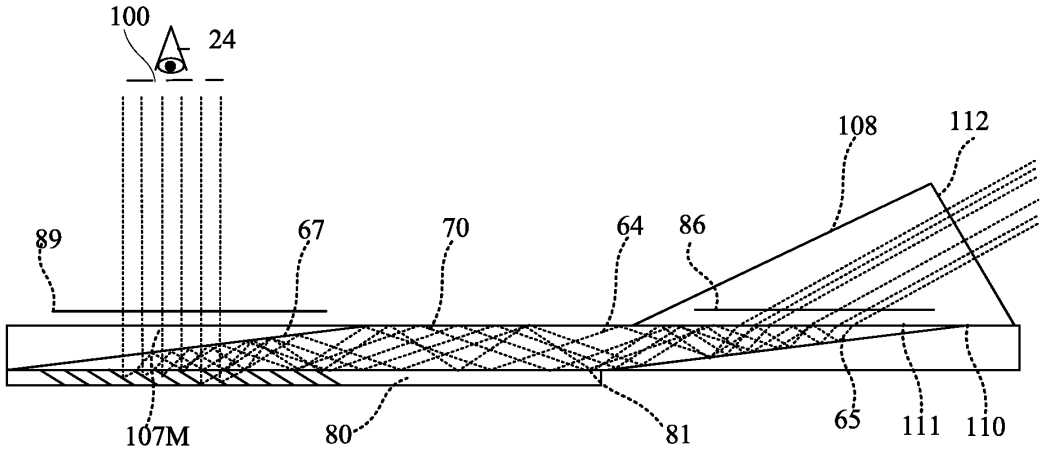
100
24
108
112
89
67
70
64
86
107M
80
81
65
111
110

FIG. 9B

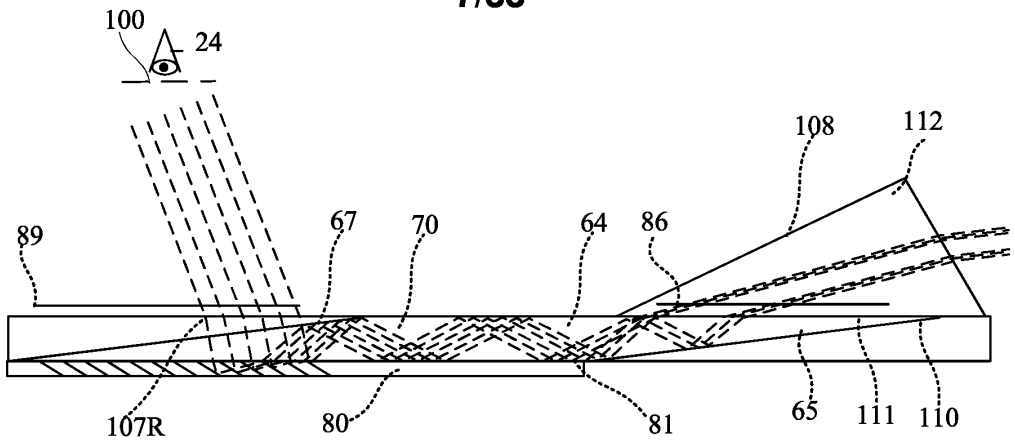
100
24
108
112
89
67
70
64
86
107R
80
81
65
111
110

FIG. 9C

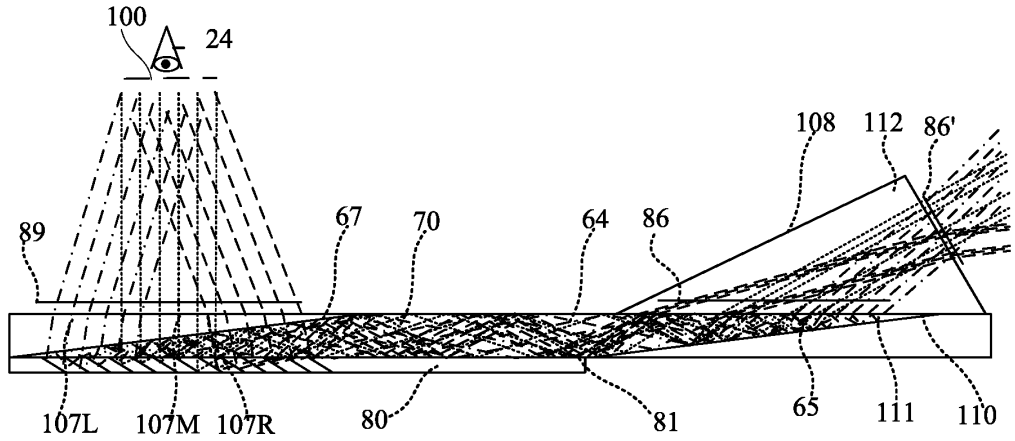
100
24
108
112
86'
89
67
70
64
86
107L
107M
107R
80
81
65
111
110

FIG. 9D


100
90
80
70
60
50
40
30
20
10
0
Reflection (%)
45
47
49
51
53
55
Incident angle (Deg.)
450 nm
550 nm
650 nm

FIG. 10

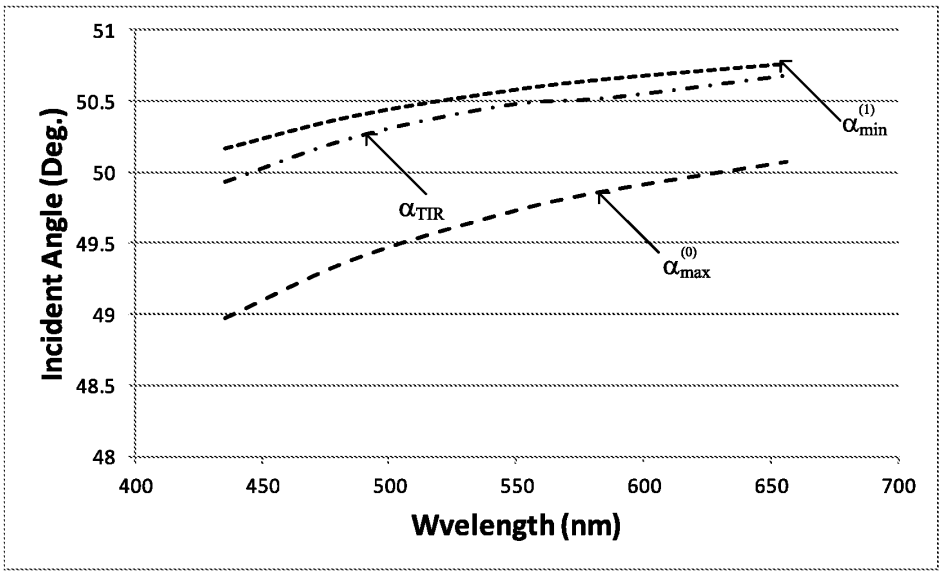
51
50.5
50
49.5
49
48.5
48
Incident Angle (Deg.)
400
450
500
550
600
650
700
Wvelength (nm)
$\alpha_{min}^{(1)}$
α_{TIR}
$\alpha_{max}^{(0)}$

FIG. 11

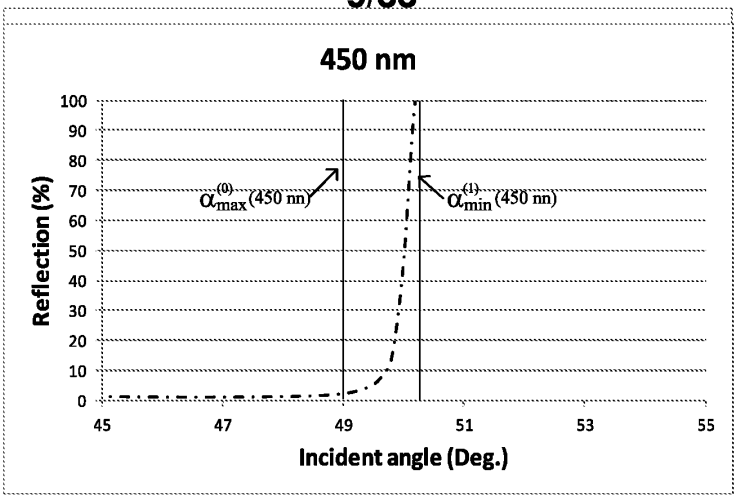

FIG. 12A

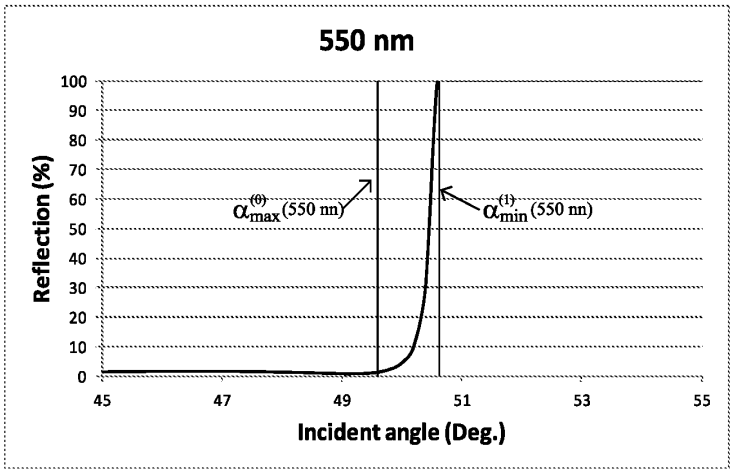

FIG. 12B

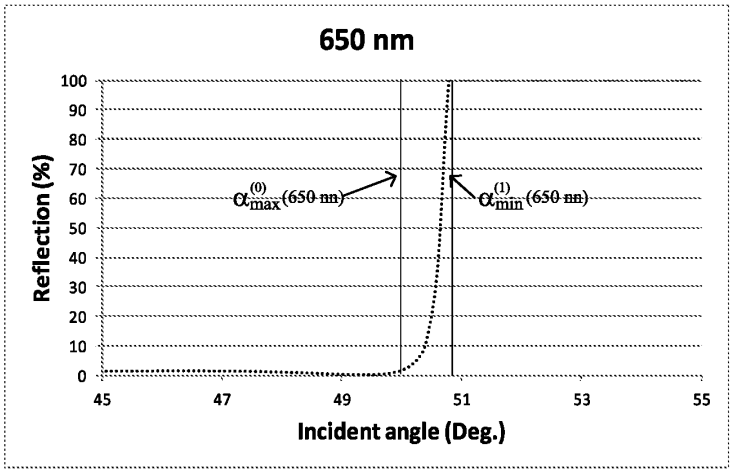

FIG. 12C

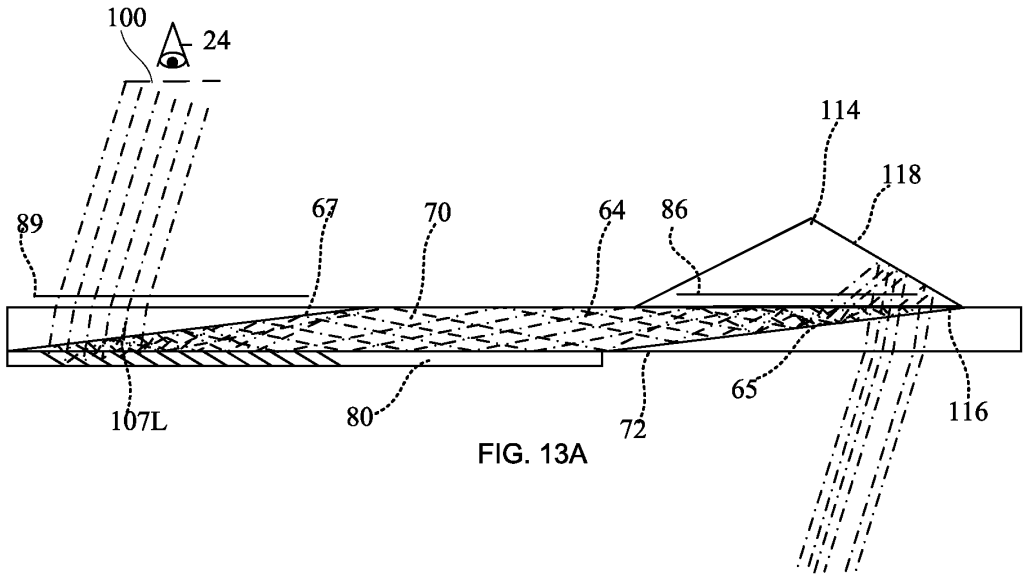

FIG. 13A

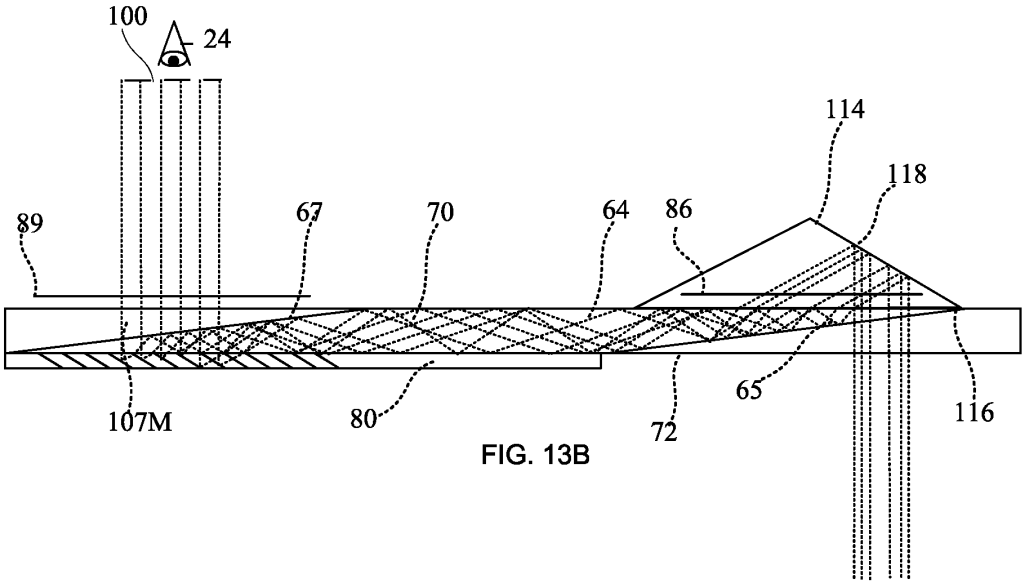

FIG. 13B

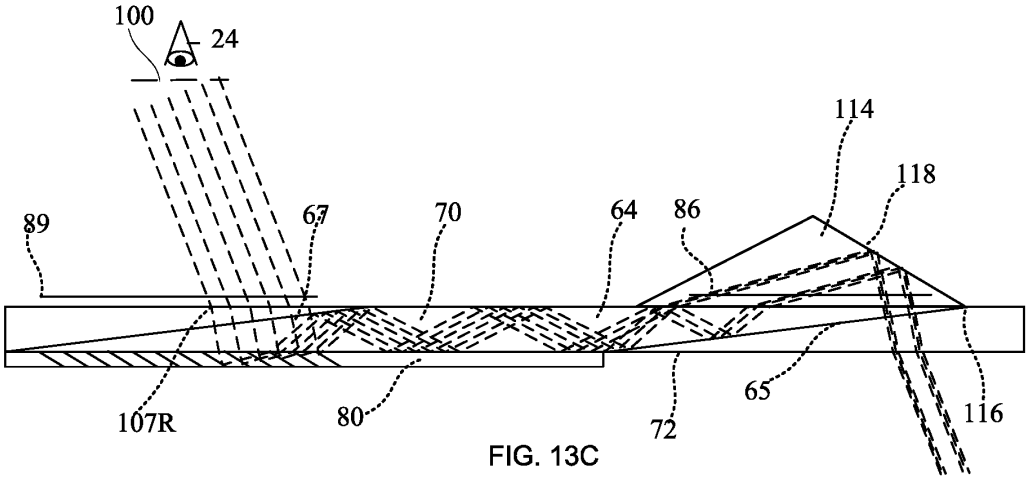

FIG. 13C

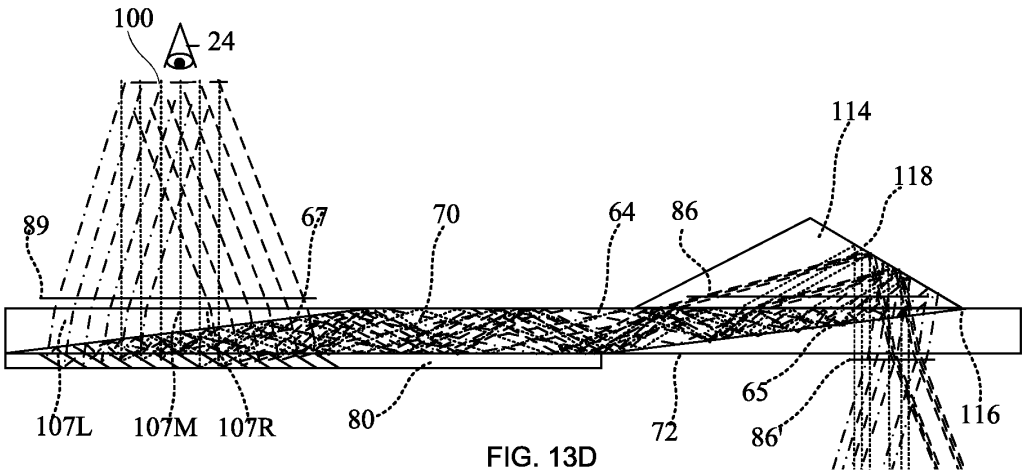

FIG. 13D

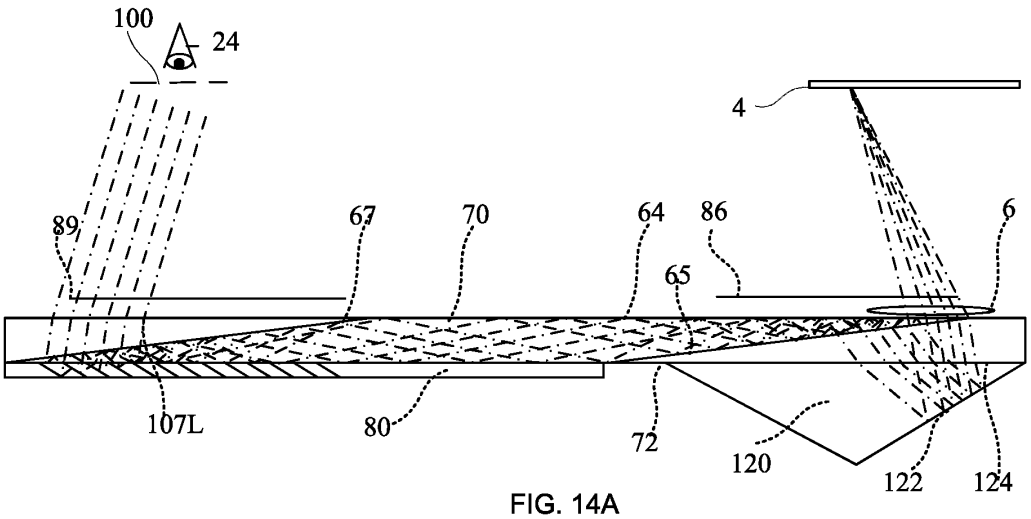

FIG. 14A

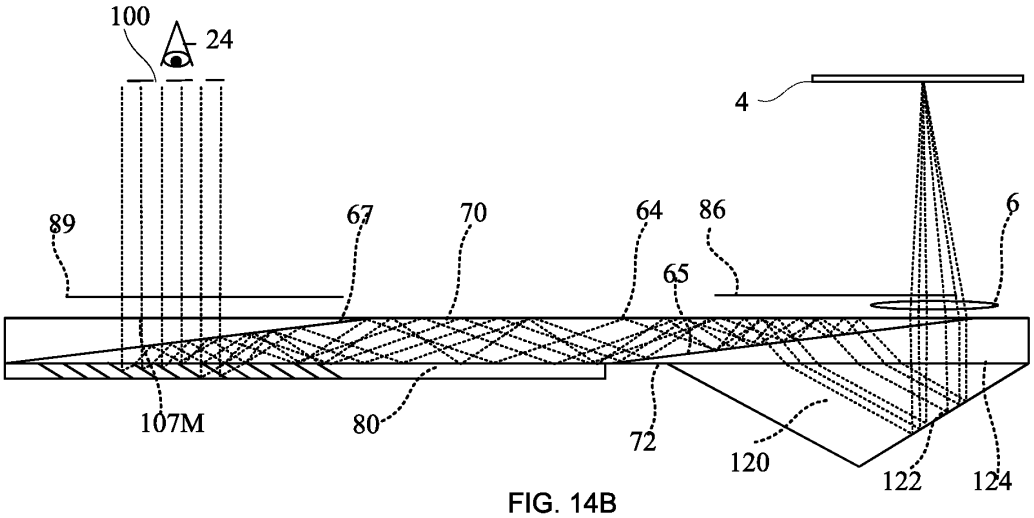

FIG. 14B

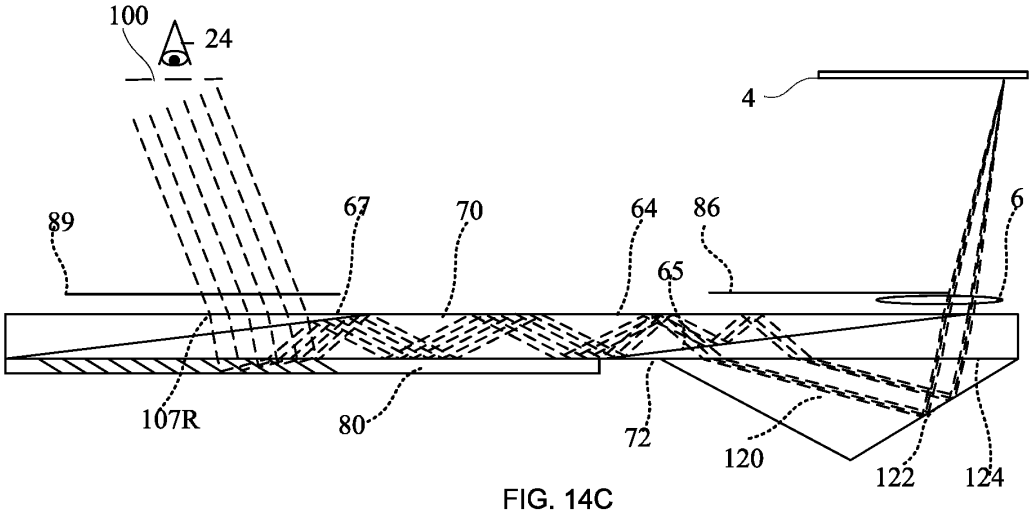

FIG. 14C

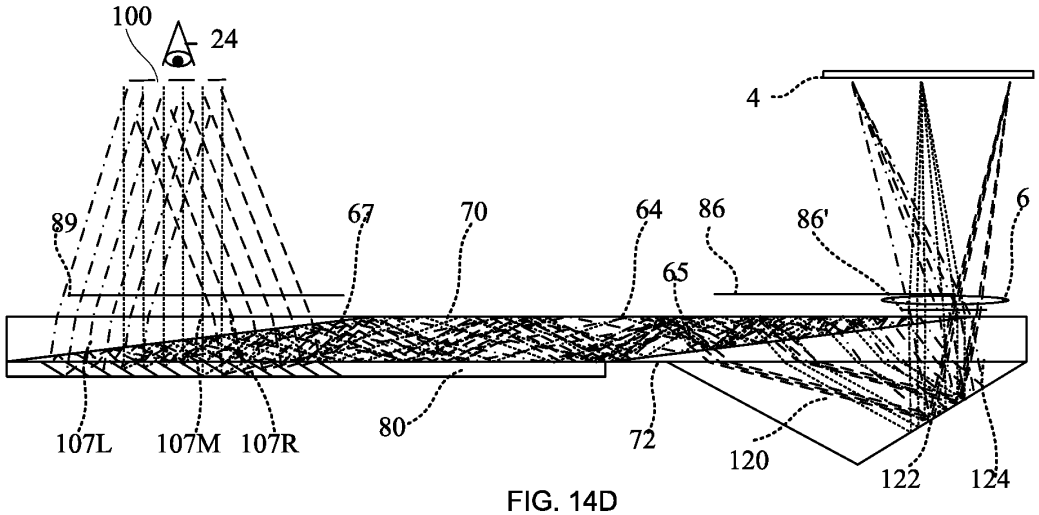

FIG. 14D

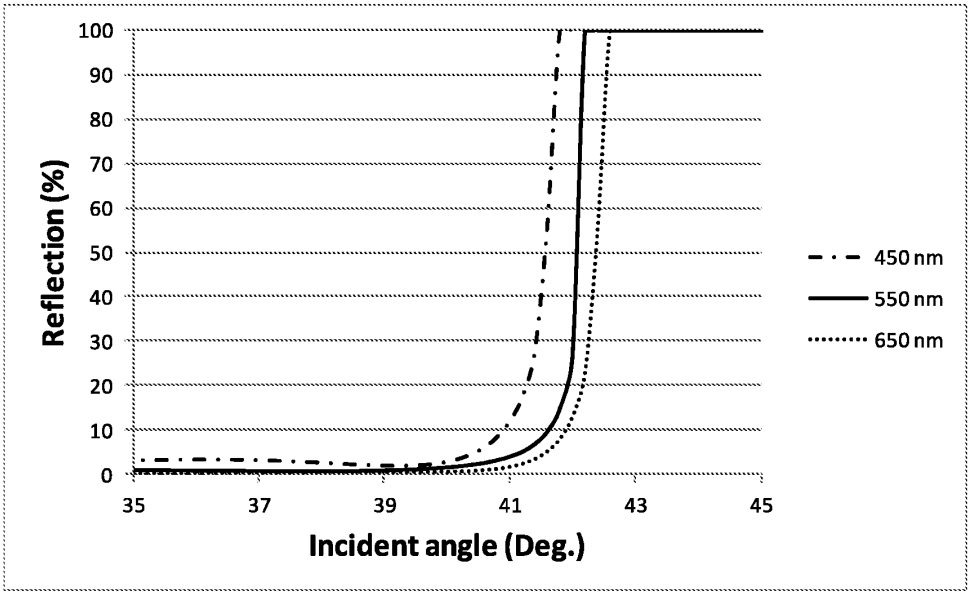
100
90
80
70
60
50
40
30
20
10
0
Reflection (%)
35
37
39
41
43
45
Incident angle (Deg.)
450 nm
550 nm
650 nm

FIG. 15

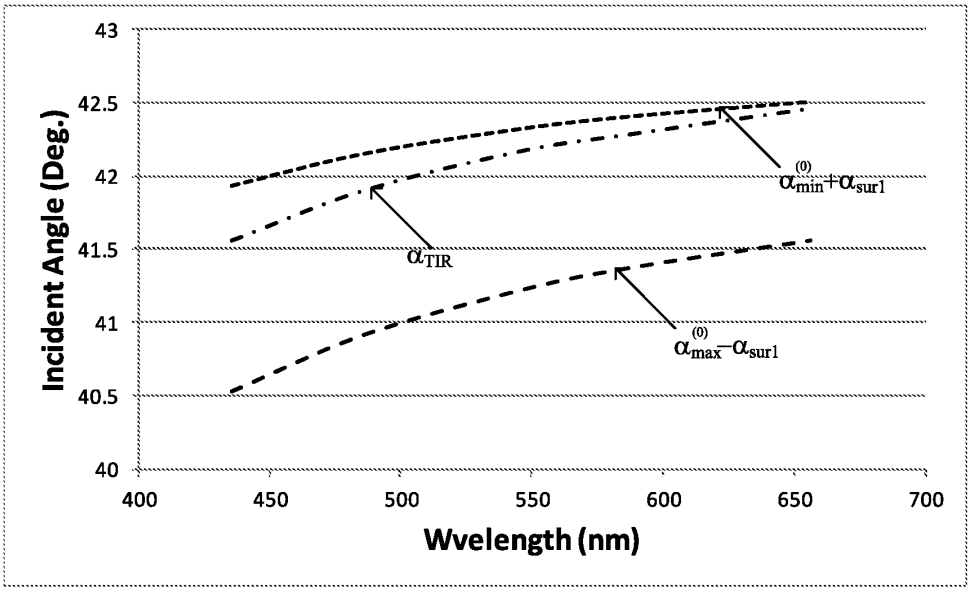
43
42.5
42
41.5
41
40.5
40
Incident Angle (Deg.)
400
450
500
550
600
650
700
Wvelength (nm)
$\alpha_{min}^{(0)}+\alpha_{sur1}$
α_{TIR}
$\alpha_{max}^{(0)}-\alpha_{sur1}$

FIG. 16

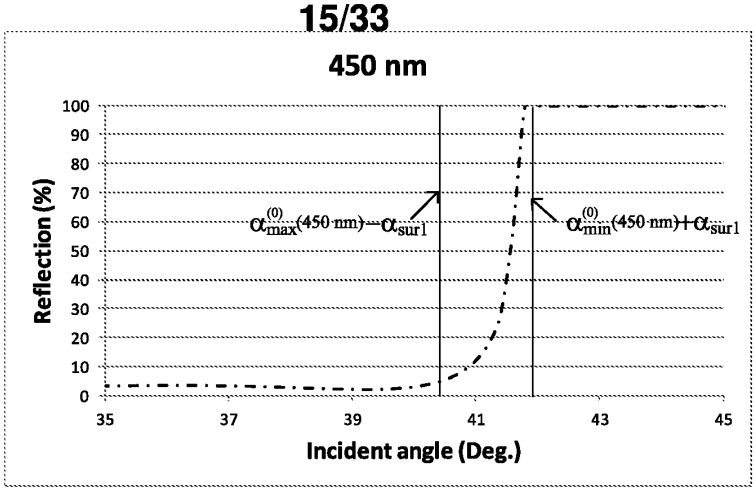

FIG. 17A

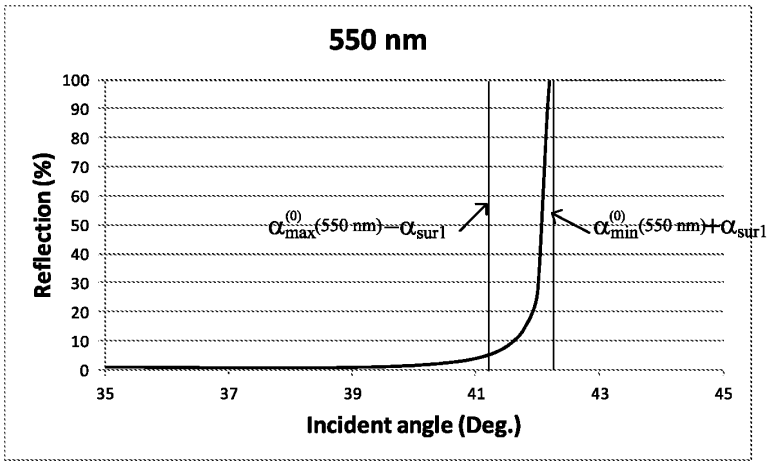

FIG. 17B

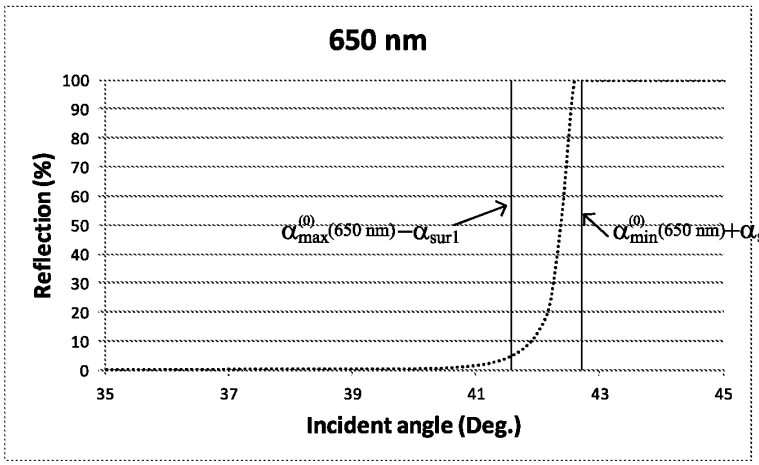

FIG. 17C

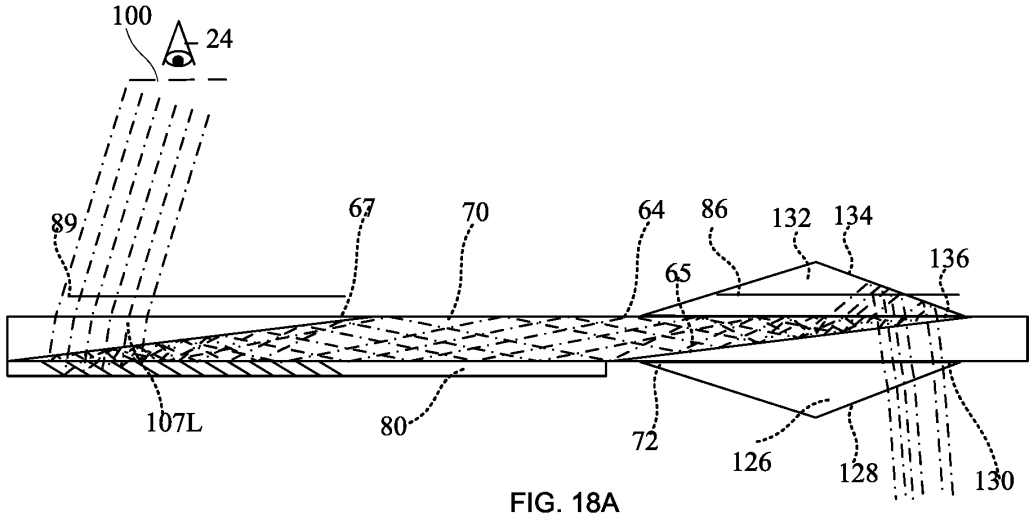

FIG. 18A

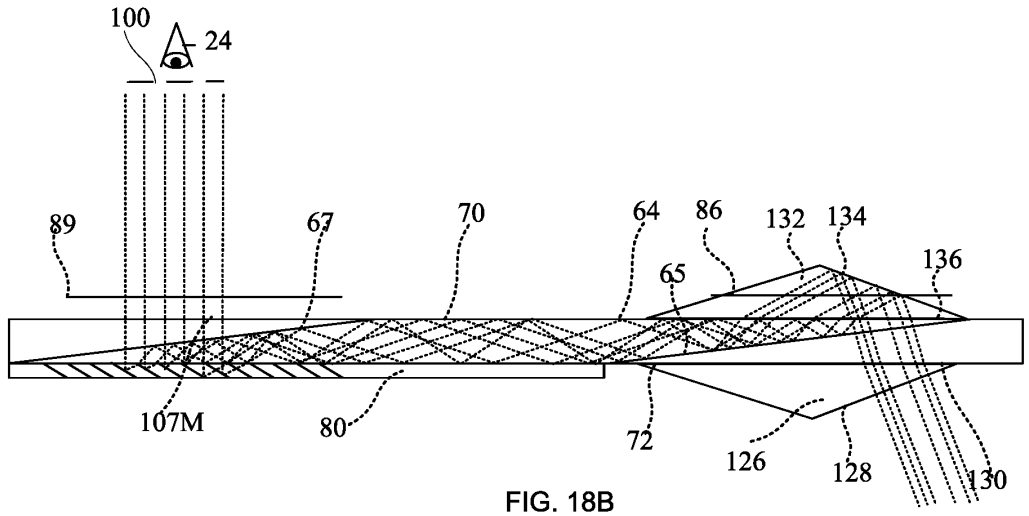

FIG. 18B

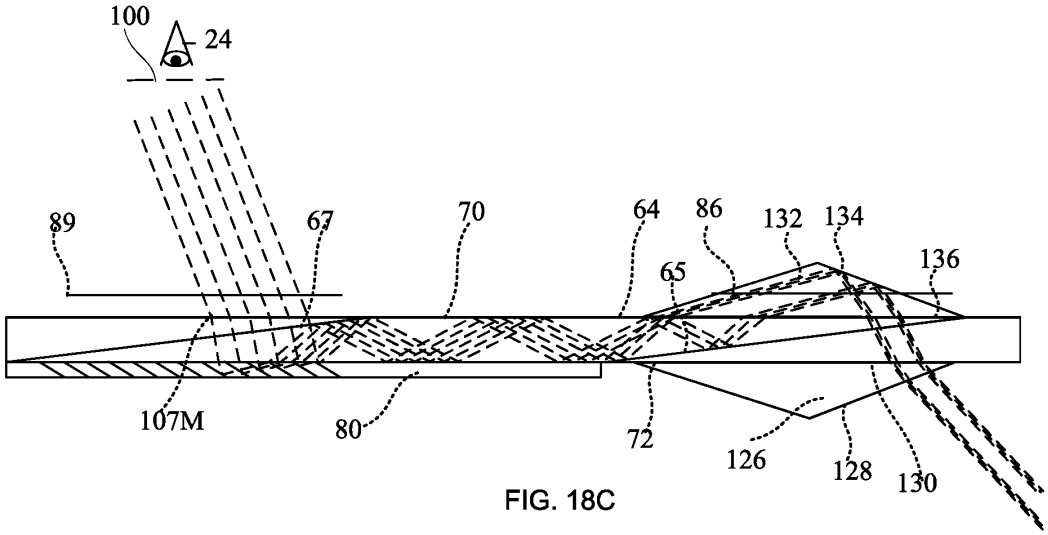

FIG. 18C

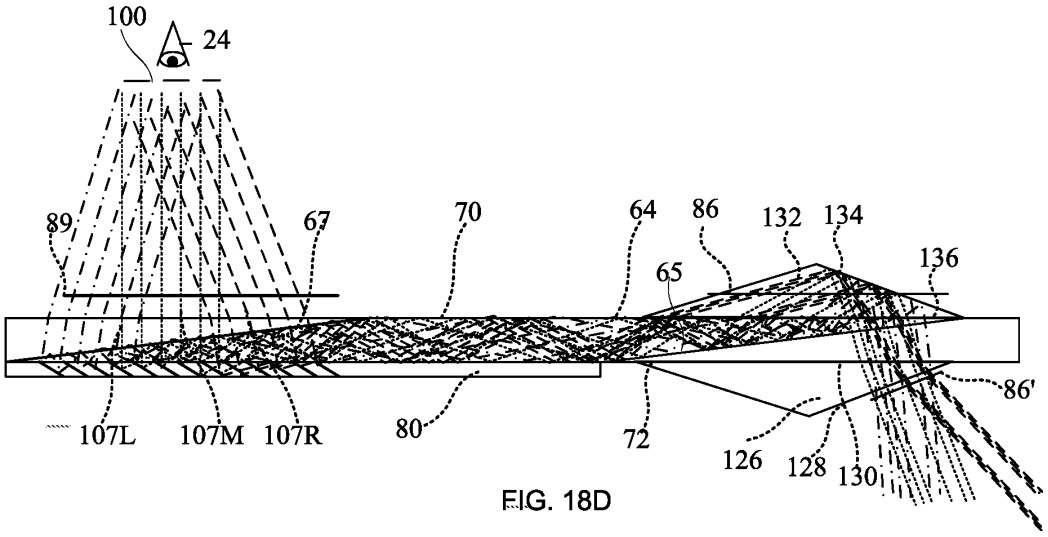

FIG. 18D

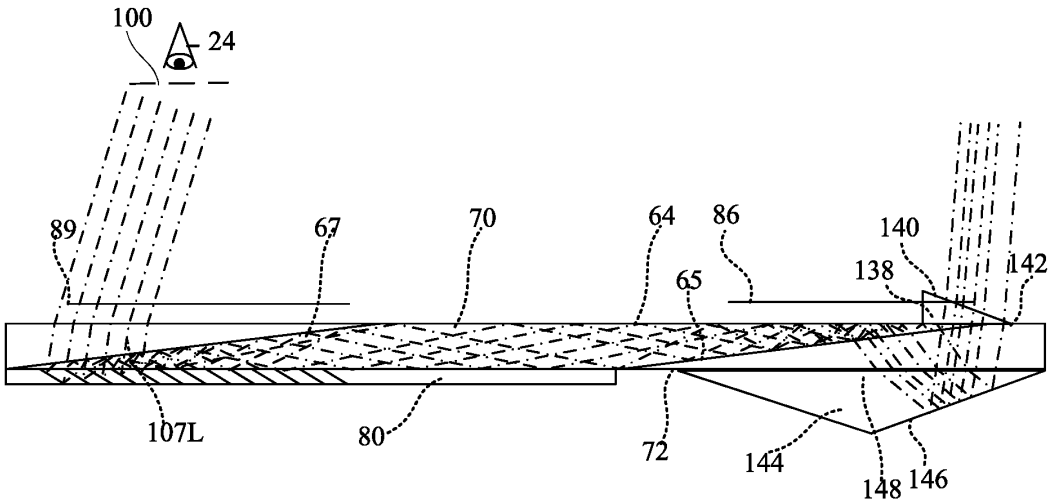

FIG. 19A

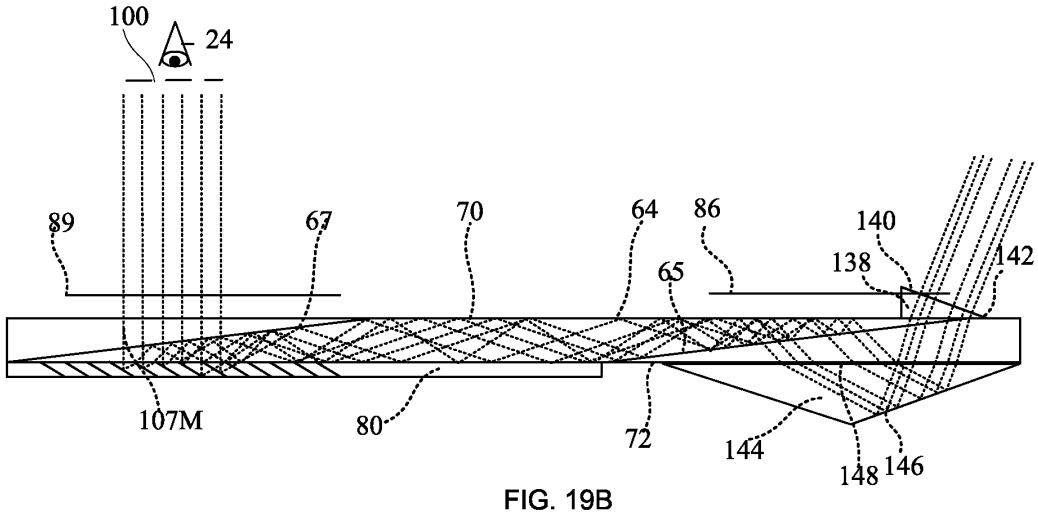

FIG. 19B

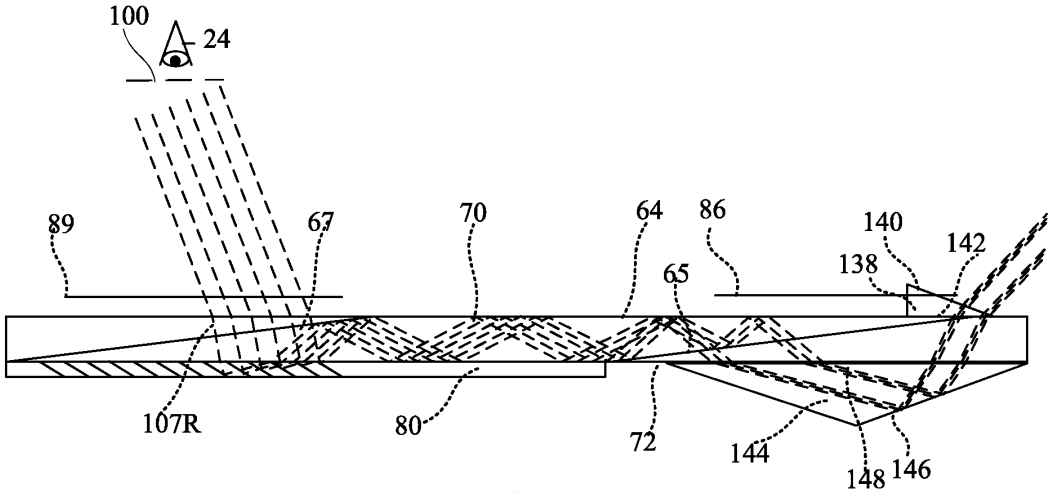

FIG. 19C

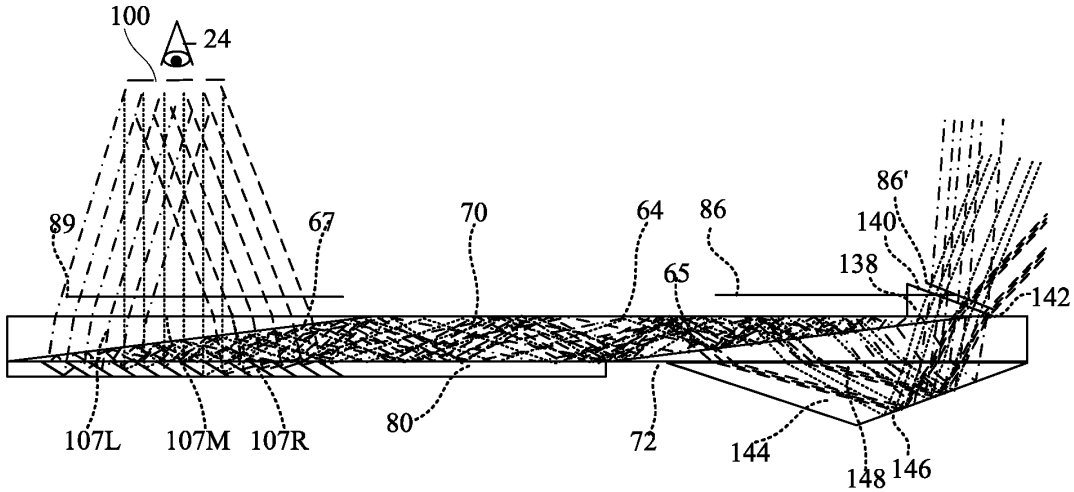

FIG. 19D

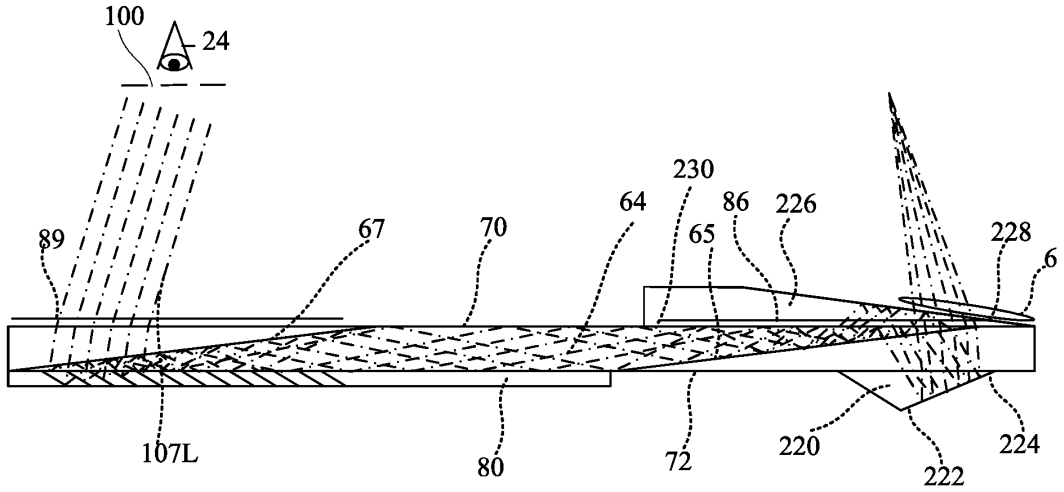

FIG. 20A

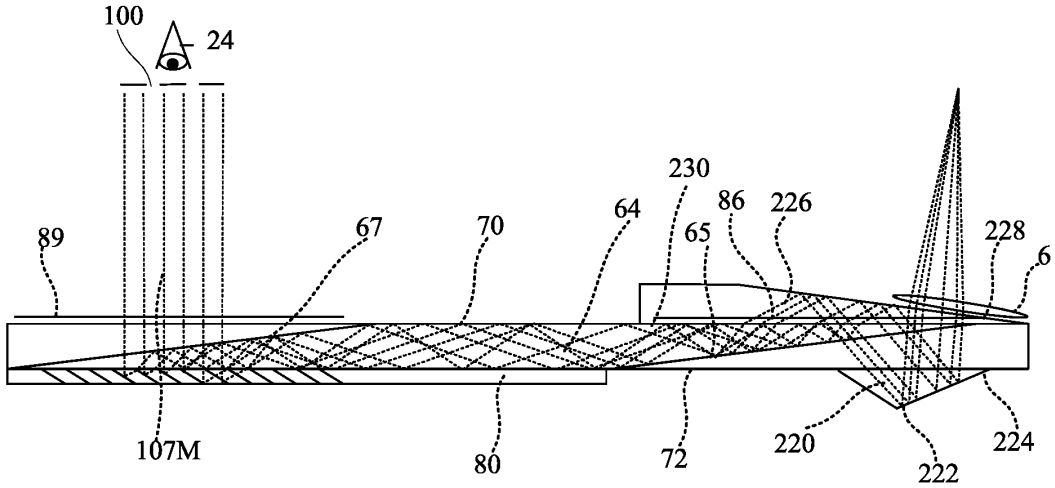

FIG. 20B

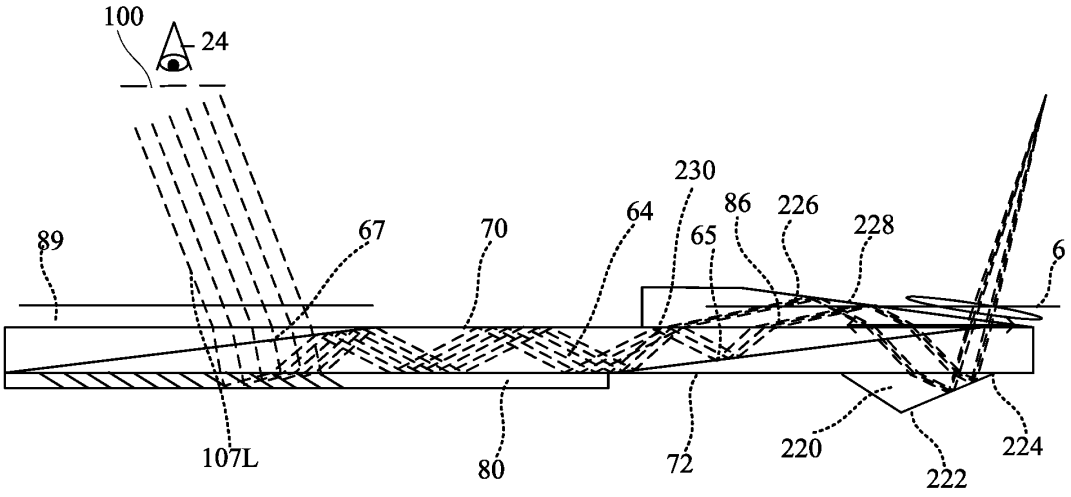

FIG. 20A

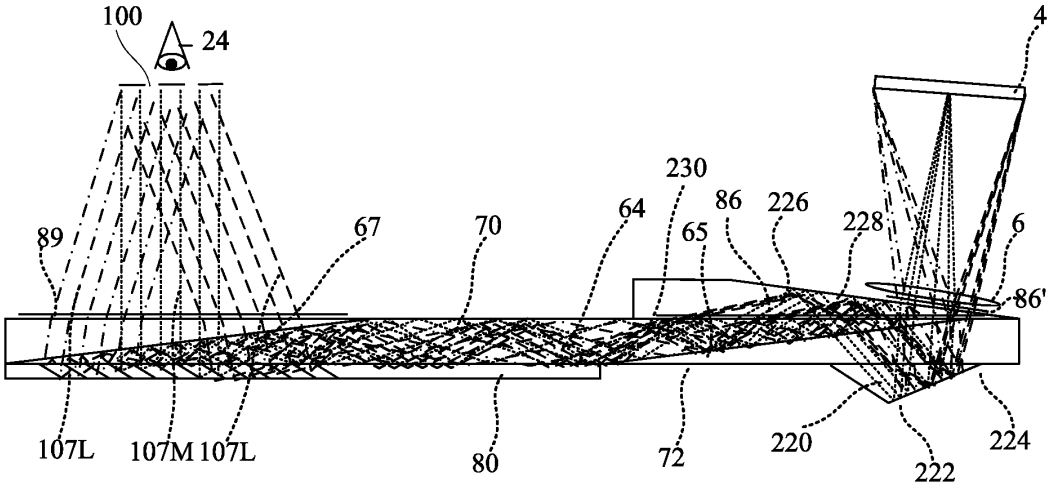

FIG. 20D

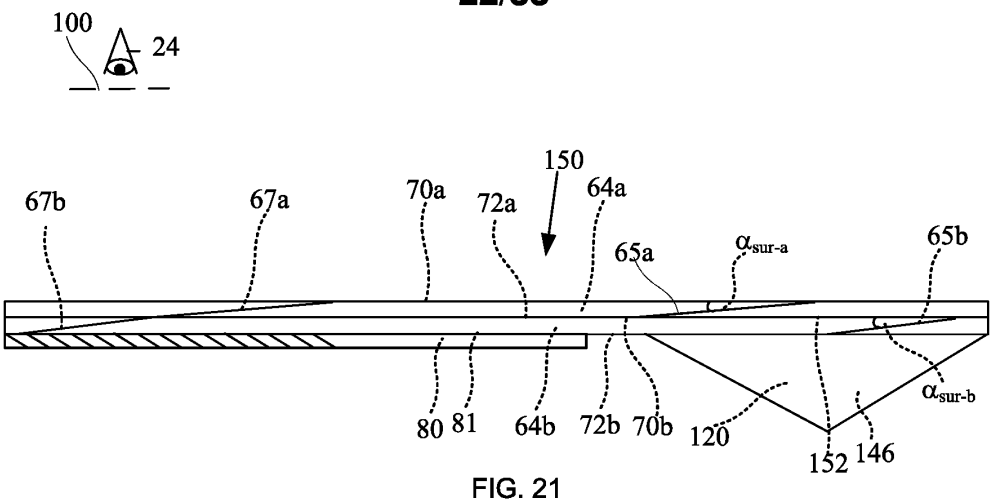

FIG. 21

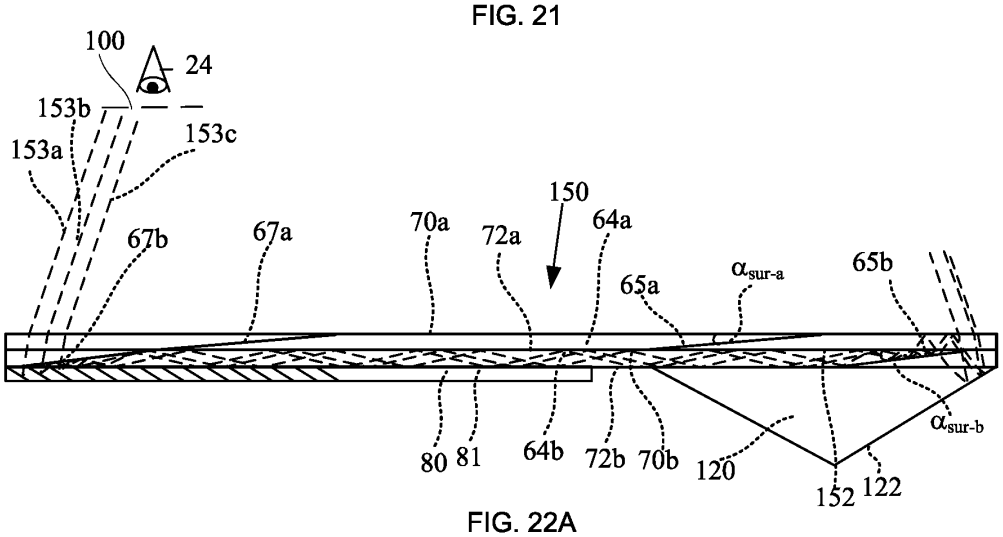

FIG. 22A

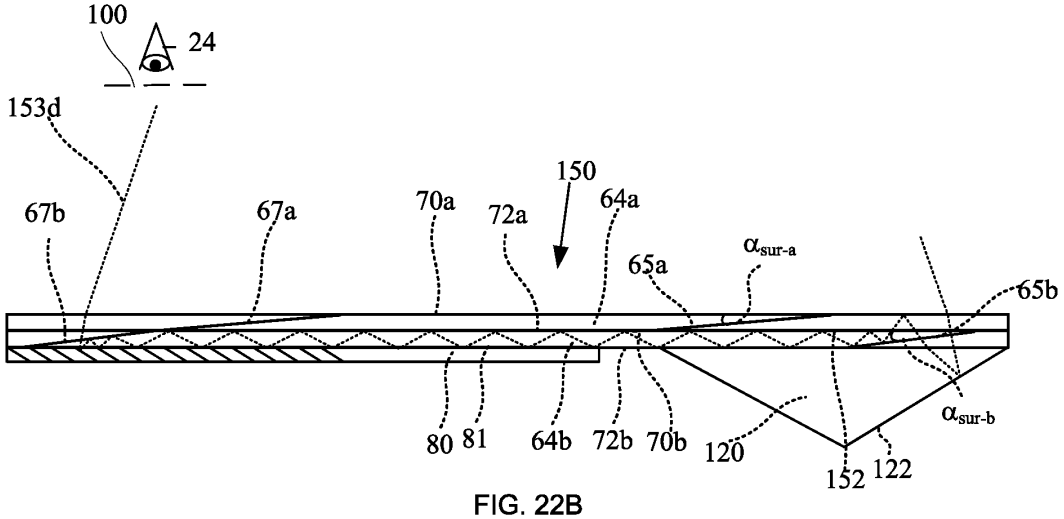

FIG. 22B

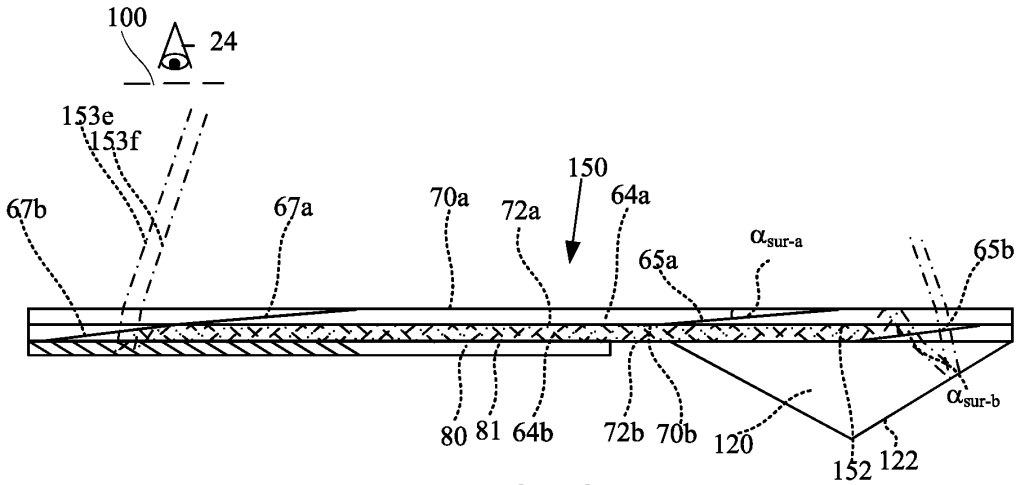

FIG. 22C

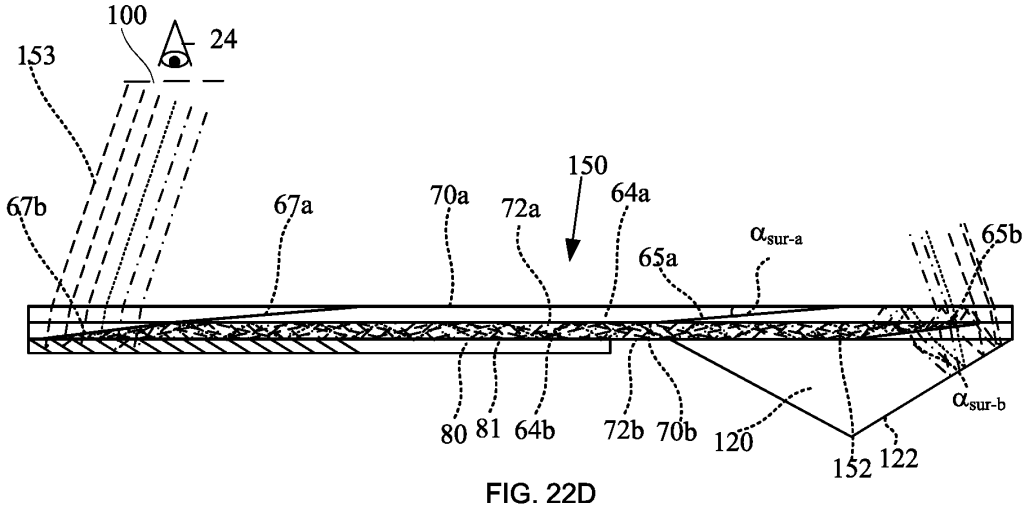

FIG. 22D

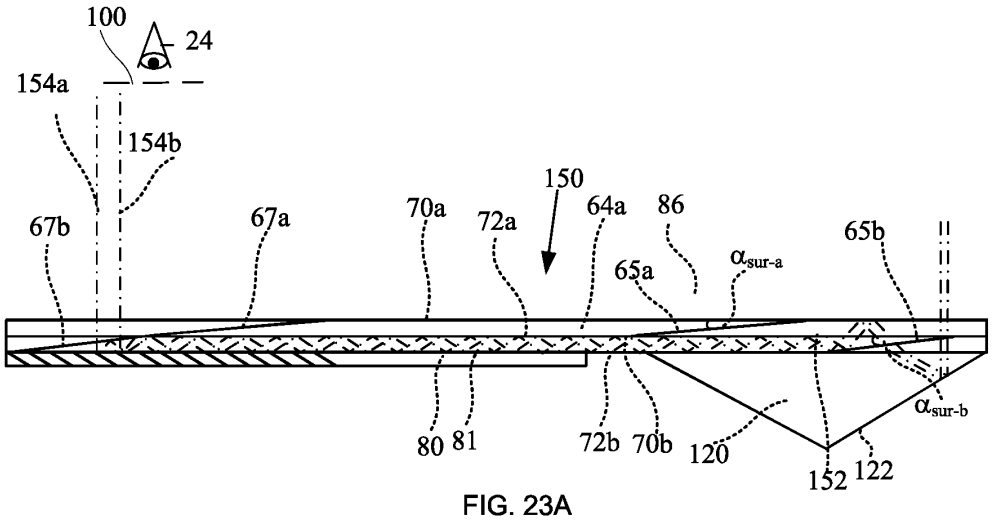

FIG. 23A

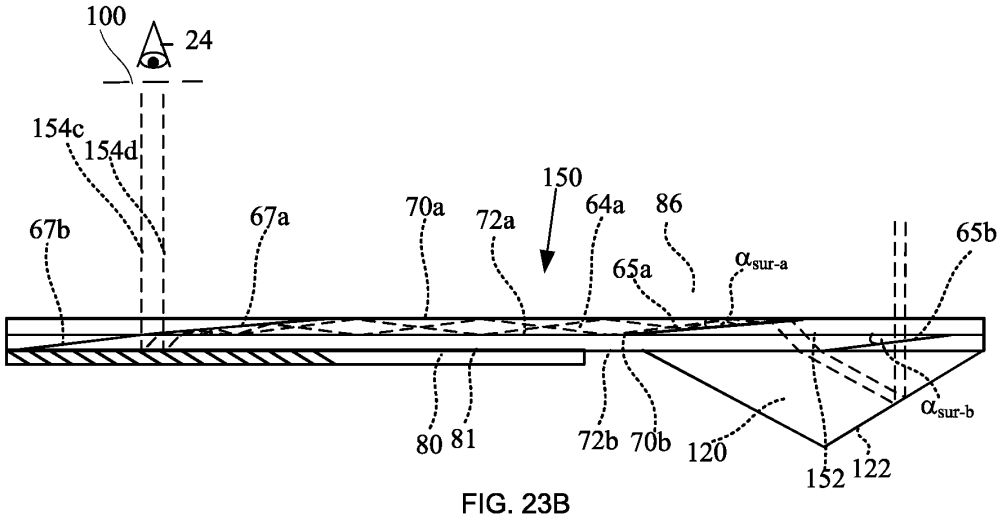

FIG. 23B

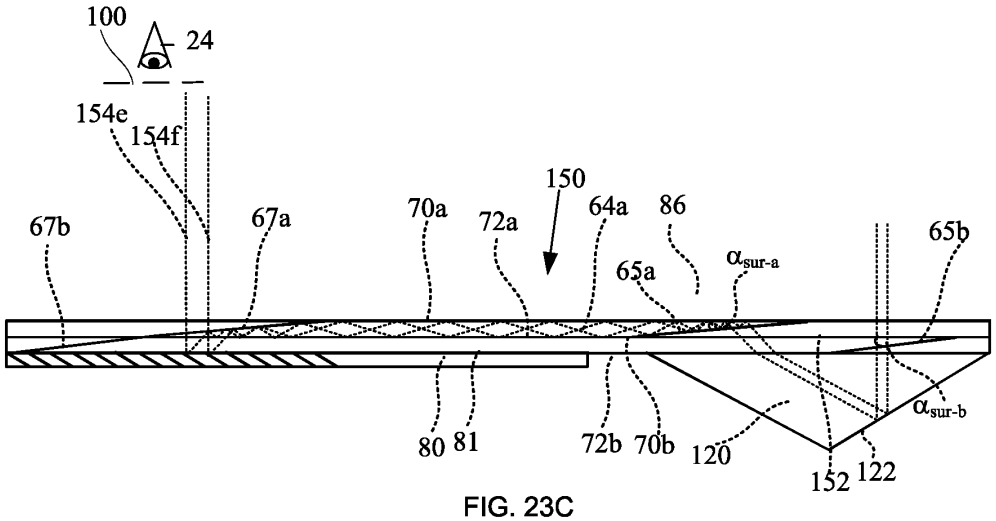

FIG. 23C

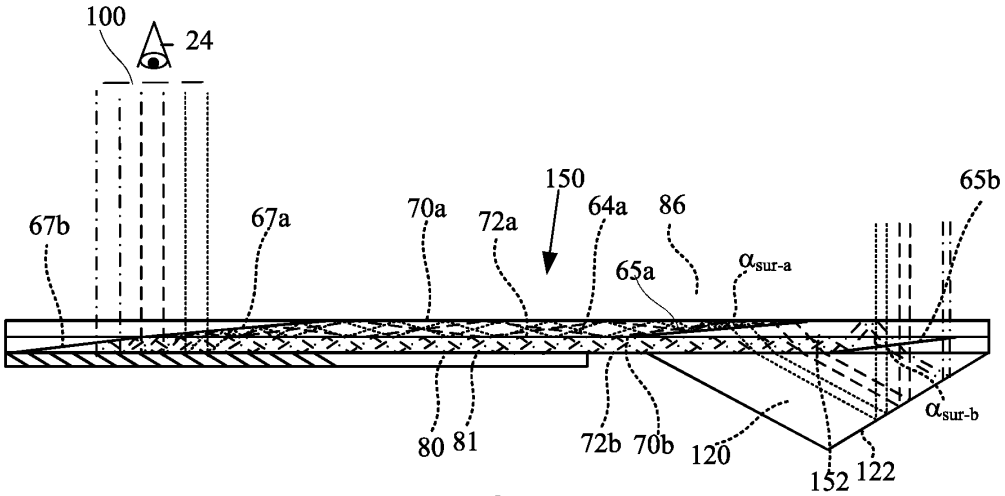

FIG. 23D

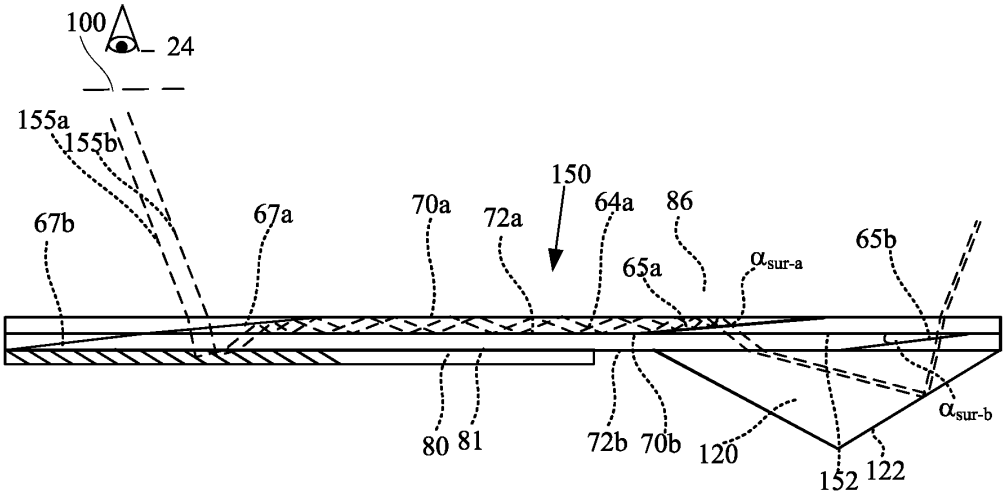

FIG. 24A

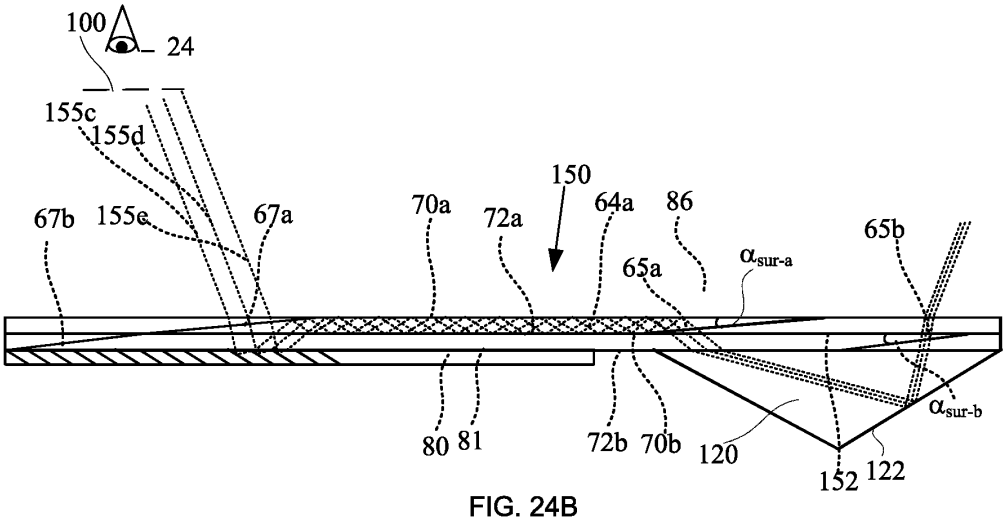

FIG. 24B

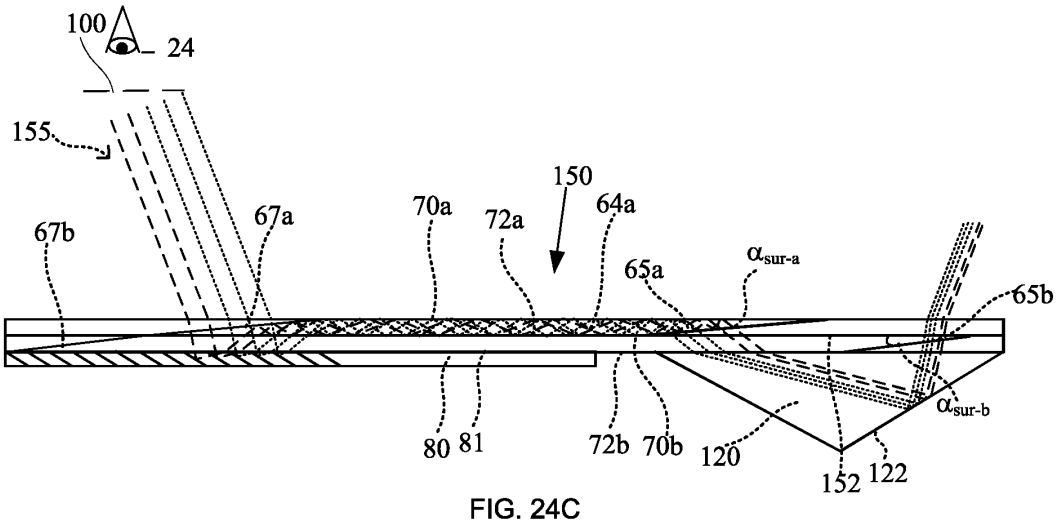

FIG. 24C

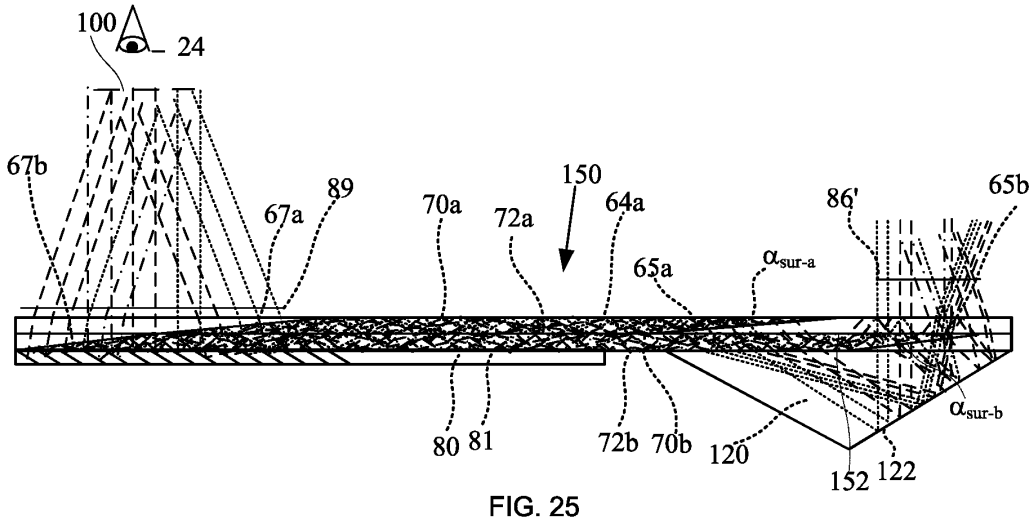

FIG. 25

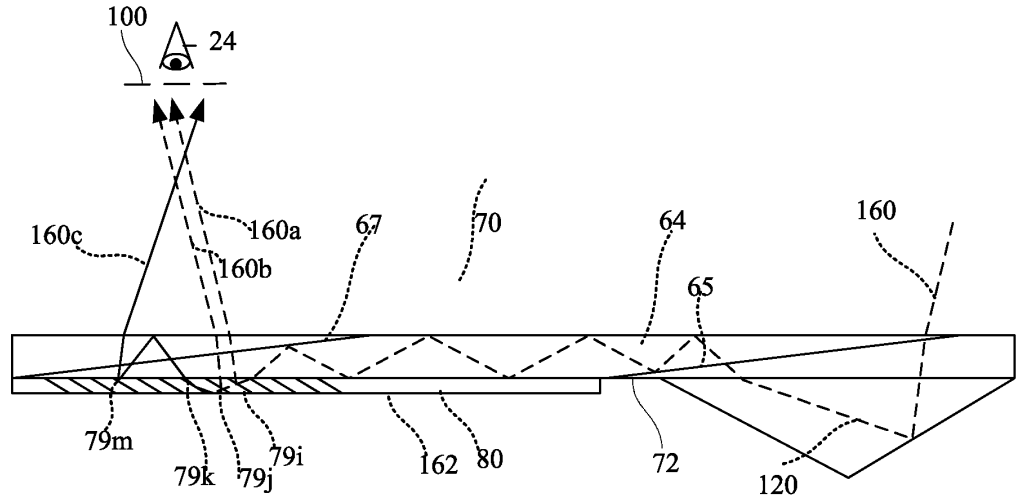

FIG. 26A

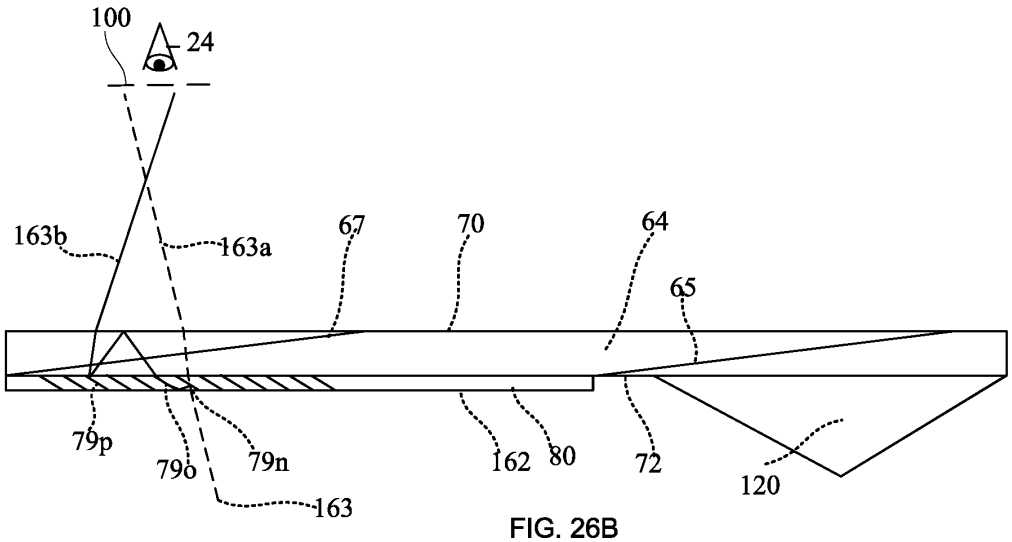

FIG. 26B

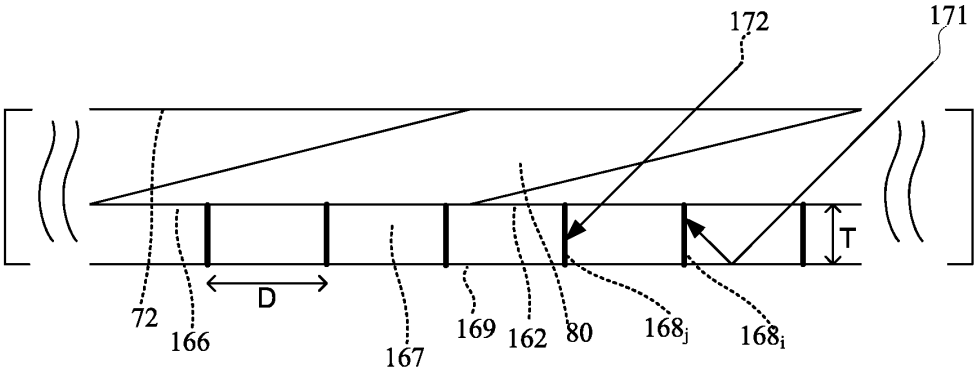

FIG. 27

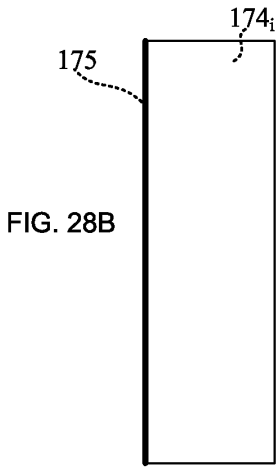

FIG. 28B

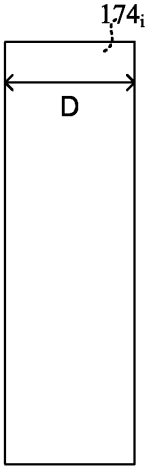

FIG. 28A

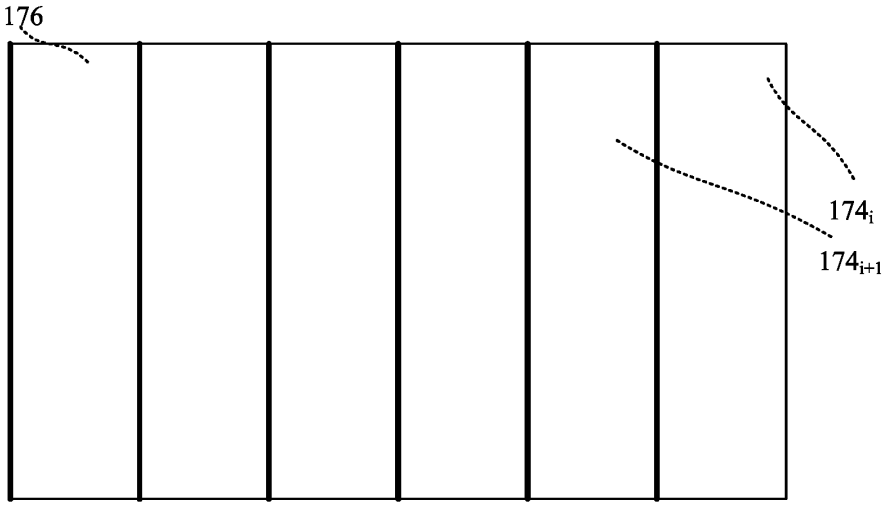

FIG. 28C

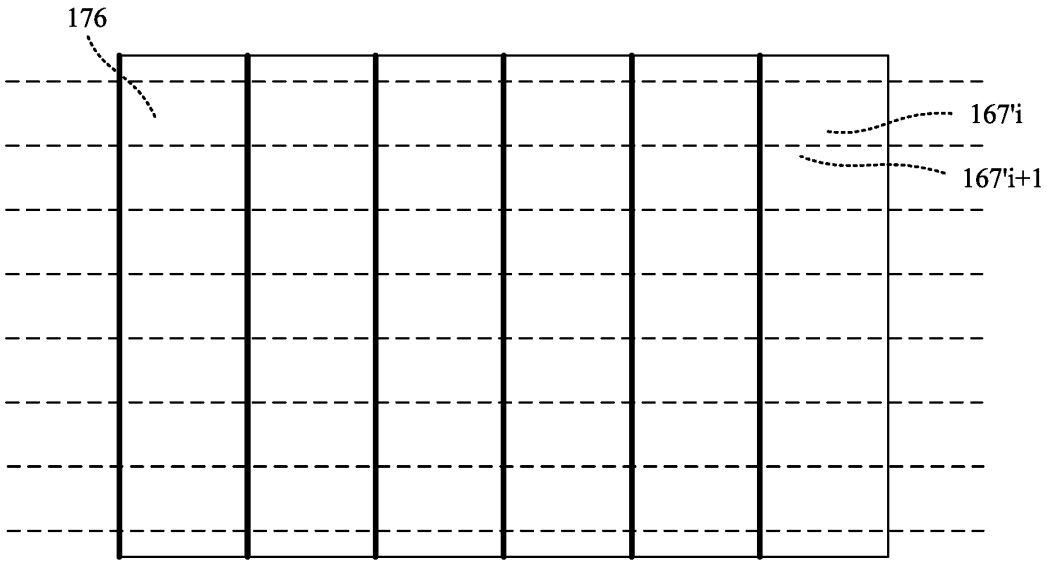

FIG. 28D

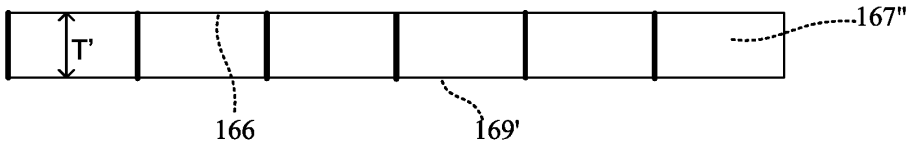

FIG. 28E

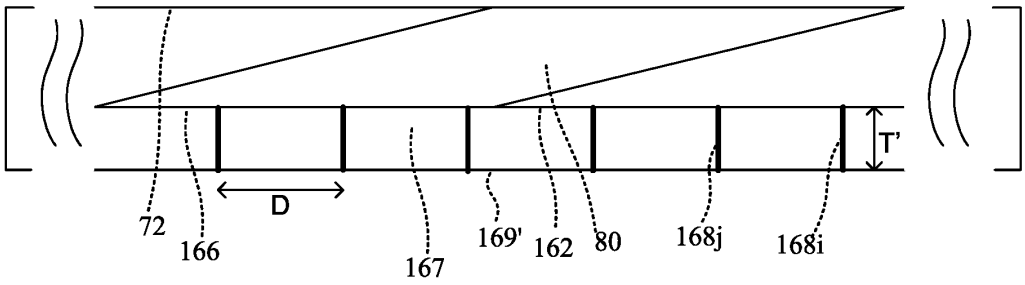

FIG. 28F

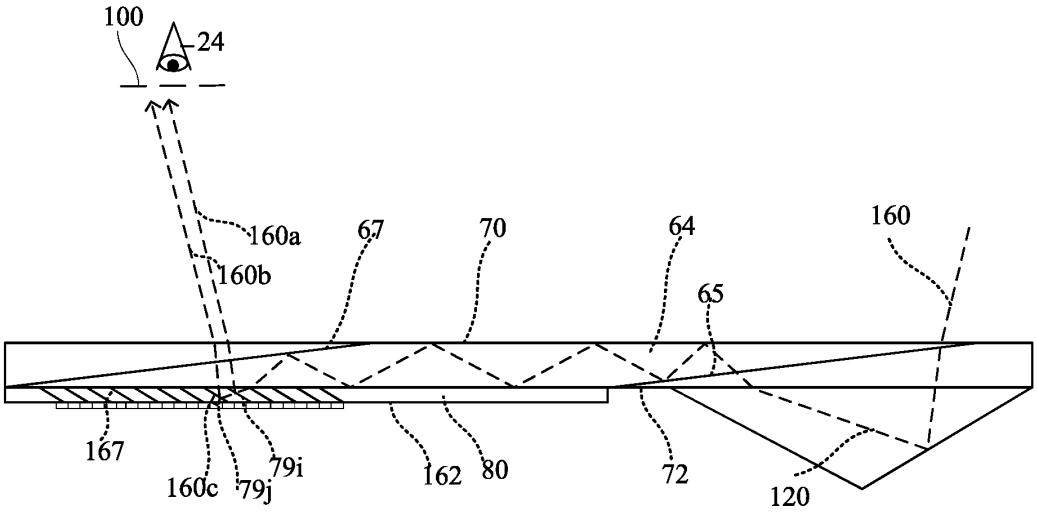

FIG. 29A

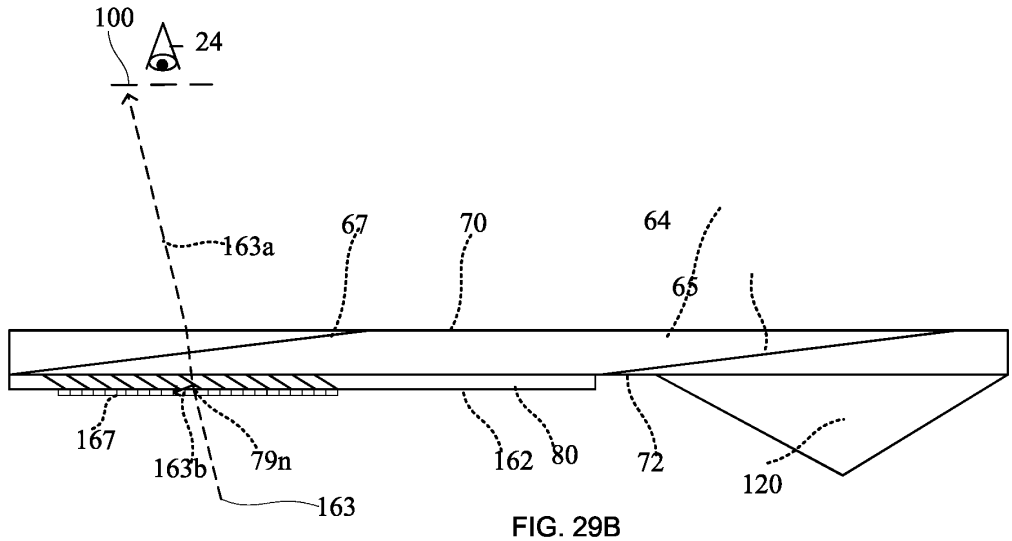

FIG. 29B

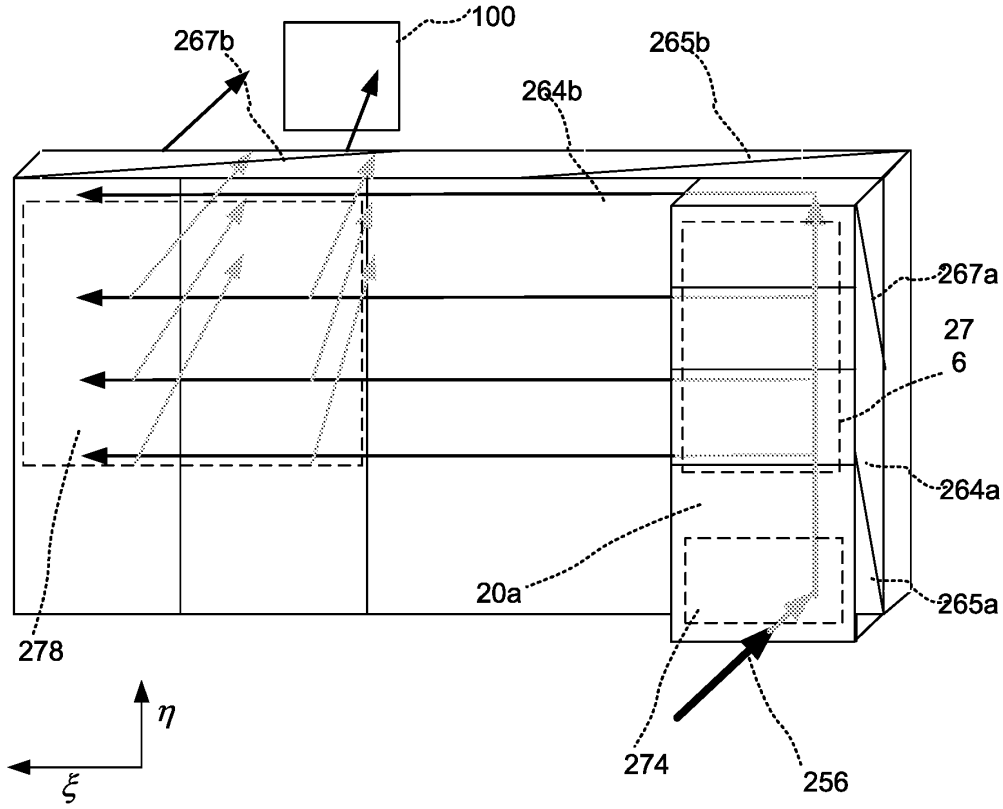

FIG. 30

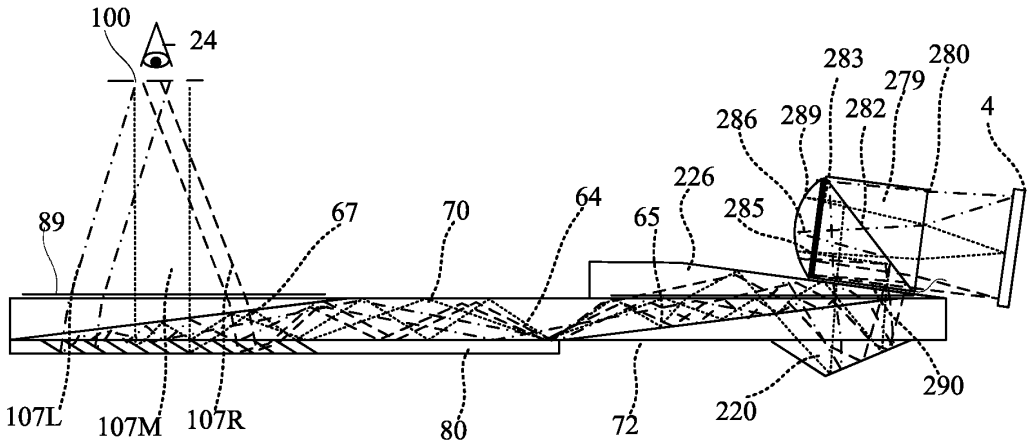

FIG. 31A

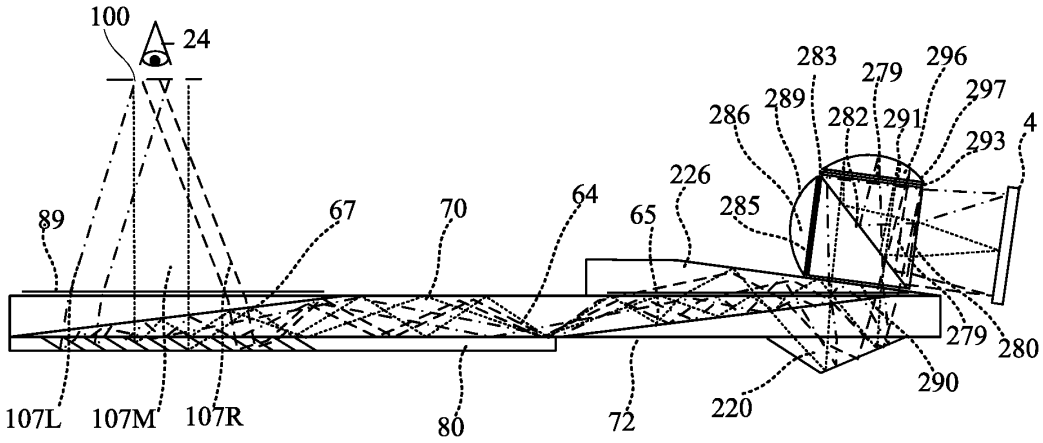

FIG. 31B